

THE UNIVERSITY OF HULL

---

**MUSEUM • DESIGN • ORGANIZATION**  
**an Exploration of Spatialities and**  
**a Project in Modelling Museum Design Activity**

being a Thesis  
submitted for the Degree of

Doctor of Philosophy  
in the  
University of Hull

by

Geoffrey Mark Matthews B.A.(Hons) (CNAA)

---

May 1996

To the memory of my father,

**Aldwyn Matthews**  
**1924-88**

## Acknowledgments

Some of the following individuals have travelled with me, some have spurred me on from afar, some have had to cope with my persistence and others with my absences. Brian Brennan encouraged me to start the project and Tom Wooley, Roger Bush, Roger Kent and Derek Cottrell, at various times, engineered institutional support, often in the most difficult of circumstances. I owe particular intellectual debts to Eilean Hooper-Greenhill, Kathleen Watt and Kathie Jenkins. On the professional side, I owe most to Alan Stimson, Alan Konya and Keith Clark. Mike Blackburn, Tony Bannister and Colin Davis have been my most constant friends and mentors. My thanks go to all of these people, and also to the many others who helped in some way. Lastly, and most importantly, my family is due my eternal gratitude for granting me the freedom to pursue a life that has kept me away from them for months at a time.

Summary of Thesis submitted for PhD degree

by Geoffrey Mark Matthews

on

**MUSEUM•DESIGN•ORGANIZATION**  
**an Exploration of Spatialities and**  
**a Project in Modelling Museum Design Activity**

The metaphorization of space creates possibilities for modelling (epistemologically) 'complex' phenomena. Four generic spatialities are explored - physical, social, documentary and paradigmatic.

There are four irreducible constructions of physical space - realist, dualist, idealist and pluralist. The generic conception of social space plays off the static (pure relations) against the dynamic (contests of interests and concerns). Documentary space is the product of contingently defined formal and informational qualities. Paradigmatic space is divided into discreet regions, each defined in incommensurable terms, with the proviso that an ironic, reflexive position may exist beyond the dissolution of metaphysics.

Organization is the differentiation of space and its subsequent narrative/visual reconstruction embodied in a temporal blur. 'Design' has an ontologically focussed meaning - designed objects, designs as objects - and an epistemologically focussed one - design processes, design as knowledge. The museum comprises an archaeology of institutional forms, has an uncertain material/social boundary and is a reflexive organization.

The organization of design presents a constellation of four complex objects - product (designed object, object as design), programme (object of design), process (ideal and experienced processes of designing), and philosophy (ideology of design, design rationale). The design of museum design involves a reconstruction of ideologically-charged, multidisciplinary, reflexive practice. Organizations display conservative, 'museographical' qualities and radically-creative, 'new-museological' qualities.

The museum-design-organization complex places the practitioner at the 'moment' of forward-projecting (designerly) and backward-projecting (museal) processes of material culture. This promotes productive processes of organizational perversion, subversion and inversion. Design is an organizational virus, the museum radically adaptive because multiply infected. Through consideration of organizational and museological objects, design research may find its centre.

May 1996

## CONTENTS

---

<b>1.0</b>	<b>Introduction</b>	<b>1</b>
1.1	Origins of the Project	2
1.2	Focus and Strategy	9
1.3	On Writing and Reading	13
<b>2.0</b>	<b>Space and Theory</b>	<b>19</b>
2.1	Physical Space	32
2.2	Social Space	50
2.3	Documentary Space	91
2.4	Paradigmatic Space	99
<b>3.0</b>	<b>Locations and Discourses</b>	<b>127</b>
3.1	Organization	128
3.2	Design	142
3.3	Museum	164
<b>4.0</b>	<b>Intervals and Excursions</b>	<b>183</b>
4.1	The Organization of Design	185
4.2	The Design of Museum Design	211
4.3	The Museality of Organization	231
<b>5.0</b>	<b>Force Fields and Constellations</b>	<b>252</b>
5.1	Complexity and the Design Paradigm	255
5.2	Model Transformations	269
<b>6.0</b>	<b>Summary and Conclusions</b>	<b>278</b>
6.1	General Theory	294
6.2	Museum Design	300
6.3	New directions	315
	<b>GLOSSARY</b>	<b>331</b>
	<b>APPENDICES</b>	<b>333</b>
	<b>BIBLIOGRAPHY</b>	<b>337</b>

## 1.0 Introduction

This introduction is in three parts. The first explains the origins of the project in terms of a history – an autobiography – a personal relation to certain discourses. The second explains the process of focussing the object of the project and the strategy for preparing a Ph.D. submission. And the third explains the technics of exposition in terms of a writing and reading process – the possible relations between expectation and method – and outlines the structure of the whole paper.

## 1.1 Origins of the Project

### Biography

My own background, in academic terms, is essentially that of an outsider. Where I come from bookish pursuits are frowned upon. In 1973 I turned down the offer of a university place to read psychology and mathematics and chose instead to pursue an education framed in a different tradition, that of art and design. My interests became focussed on creative practice - music, architecture, painting, performance, poetry and design all competed for my attention and actively engaged my efforts: I became committed to making and doing as the principal means of existence and my reading of history, philosophy, psychology, poetry and science although consistent became subservient to that central, all-consuming passion for practical and visionary self-fulfilment. I took a first degree in three-dimensional design (interior design) - it could have been just as easily in fine art or architecture - and on graduating I launched myself into performance work with a poet and a musician, and into painting. By 1979 I had lived below the breadline for as long as I could bear. I felt trapped and was probably heading for a breakdown. I had had my first encounter with the bureaucracy and, as far as I could see, the blindness and corruption of regional arts administration, and I needed to get out. The opportunity to change direction was provided, ironically, by a government department. I was plucked out of provincial poverty by the Home Civil Service and placed in the central London design studio of the Department for National Savings. A series of creative challenges was prepared for me by my great mentors, Bob Young, at that time one of the most senior graphics

officers in the Civil Service, and Peter North, DNS's Exhibition Designer, and a new practical education in communication, organization and politics began in earnest. I woke up: I became a designer. After less than two years I was forced into a sideways move and ended up in what I now believe to have been one of the most challenging, intriguing and complex environments in which to work as a designer during the 1980s, a national museum.

### **Museum Experience**

At the National Maritime Museum, in the idyllic surroundings of Greenwich park, I met, and for the first time had to work very closely with, individuals of the highest intellectual calibre, many of them world-renowned authorities representing the widest range of academic and museographical disciplines - archaeology, social and military history, conservation science, literature, engineering, art history, astronomy, and computer science amongst others. Unlike many junior members of the museum establishment, in a relatively short period of time, I worked with individuals from every part of the museum (this was one of the privileges of being a designer) and I found myself with an overview of the museum as an organization for which, I am sure, the director would have given his back teeth: I saw the informal structure beneath the mask of formal hierarchy, the short-circuiting lines of communication upon which functional effectiveness relied, and the benign subversions that supported the status quo. I saw the place from the inside, from the bottom up, and I saw both curatorial territoriality and conservatorial solidarity tested by the contingent demands of the exhibition project and toyed with by the director and



certain over-enthusiastic, some might say ‘meddlesome’, trustees.

### **Lessons of Praxis**

I learned some very important lessons: (1) The ability to use words, to use a powerful vocabulary – the vocabulary of one privileged academic elite or another – fluently is highly respected and brings with it influence and authority. (2) Many highly intelligent and educated experts are unable to communicate effectively with ordinary people – they tend to end up with one vocabulary only, the vocabulary of their peers. (3) These same experts often have no (visual and practical) imagination – somewhere along the line the rigours of institutionalized academicism suppress most of the visionary, experimental, speculative capabilities they may once have had. And (4) consequently they have little understanding of, and a poor appreciation, of the value of ‘design’ in its broadest sense - design as the process of conceiving, planning and effecting radical change in the human environment. They seem not to understand the nature of the complexity that design is best able to tackle. All privileged vocabularies represent each other’s inadequacies and they are, in the main, incommensurable. This condition of uncertainty, of conflicting understandings of a practical situation, of counteracting forces and contradictory requirements, is exactly the condition in which design thrives. Design is the process of effecting change, whether desirable or necessary or not, when there is an incomplete understanding of, or a dispute about, how and why change should be effected. Design takes over where engineering, decision-making ... procedural technique in general, reaches the limits of practical rationality. (5) The scope for change in some

environments is, in any case, artificially limited by the nature of certain human organizations. Mature organizations, institutions like the museum, tend to become primarily concerned with self-perpetuation and only secondarily concerned with their supposedly principal purposes, even if these are evolving. (6) In a complex practical situation it is not that difficult, given a designerly approach, to hammer out enough common ground to be able to pilot a team, even one made up of antagonistic intellectual heavyweights, through a process of radical change, and to do so from, in intellectual, political and social terms, an inferior position. What seems to matter most in such situations is not intellect or academic status, not control of policy making and resource management, and certainly not age, long service or social achievement – what matters is the nodal position in a network of communications that the design process forces upon the designer, and the ability to organize and manage multiple conversations by acting as a translating, filtering, conduit.

### **Interpretation**

I learned these lessons in an environment which initially provided the support necessary for innovations in procedure and technique but which eventually became one in which creative organizational transformations, powered from within, were overtaken and subsumed by those who feared their apparent lack of control over largely autonomous collection-based departments and non-curatorial functions. The formal restructuring of the museum, to create separate collection management and research divisions, at one stroke wiped out traditional curatorial territories and put senior staff firmly back in control of museum development. The design studio was

first reduced and then swallowed up by a new exhibitions division headed by a senior curator. Computer systems, formerly a small section of the printed books and manuscripts department, were similarly restructured and subsumed by a larger documentation project group that drew in mainly younger curators from all of the former collection-based departments. Another senior curator who reported directly to the deputy director of the museum then headed this museum-wide operation. Such ‘rationalization’ has continued into the 1990s.

In retrospect, this process can be seen as an ‘obvious’ response to the political and economic climate of the times – the so-called ‘enterprise culture’ of the Thatcherite 1980s – and one must admit that positive things came out of the process as well as some regrettably negative ones. However, the greatest loss has been to museum design itself. To a large extent the fledgling discipline was turfed out of the nest just at the time when it was beginning to develop museographical credibility and even beginning to be recognized in some quarters as essential to creative management and appropriate development in wider museum terms. Independent museum design consultancy boomed in the 1980s, fed largely by the exodus of design talent from the national and larger provincial museums and by the influx of new graduates from an expanding higher education sector, but at the cost of a coherent environment in which to work. A museum generally cannot afford to hire consultant designers to get under the skin of the institution, to find out what makes it tick, and to work from within at a grass-roots level. Such designers are, therefore, normally limited to superficial involvements that are carefully structured by ‘official’ lines of communication and the strictures concomitant with one-off projects. Museum directors and the designers

themselves have drawn attention to the positive aspect of this arrangement: the fresh eye and approach the outsider is able to bring to the situation. However, the difficulty with this is that the consultant designer may only see a snap shot of the organization which tends to present the illusion of stability and coherence, and may only be permitted to deal with 'directed' or prescribed change. What has been lost is the opportunity for a deeper creativity rooted in collective dynamics, which has the potential to deal with the immanent possibilities of change. This is a more open-ended process, which takes place over an extended period and requires the organization as a whole to learn from its mistakes and to learn how to take risks successfully.

### **Project as Journey**

In the views expressed above the language may have changed and the narrative may be tighter but, as closely as I can reconstruct them, they are the views I held in 1987. I left the National Maritime Museum in 1986 to take up a lecturing post in Museum & Exhibition Design at what is now the University of Humberside and, with the encouragement of the then Head of School, Brian Brennan, I decided to pursue the issues raised by my experience through further research. Therefore, there is a sense in which these views constitute my project: they represent its origins in terms of an experience, both professional and emotional, and an aroused intellectual curiosity. There is a charge that can be made, that I have decided what the outcome should be before I have even begun to question the validity of these views and to explore the alternatives, but I am not worried by this. I believe it is important to be honest at the beginning about

where one is coming from and to know what prejudices and preconceptions one is bringing to the work. It is important, not because the outcome is predetermined but, because they constitute my initial position in raw unequivocal terms. They always were open to change, they have changed, and they remain 'provisional'. In this project I expected to travel into new territory and I did not know whether I would pass over the old ground again. Some of it I did but it looked very different.

## 1.2 Focus and Strategy

### Process

There were three stages in the process of narrowing and focussing the project. Initially the aim was nothing less than a ‘paradigm shift’ – to reframe the Praxis of Science as ‘Design’ using the museum as a microcosmic context in which the complexity of the condition of modernity/postmodernity was amply reflected. This over-ambitious scheme narrowed at first to one of exploring the interdisciplinary problem of the multidimensionality of design. In this, incommensurability and theories of space have to be accommodated in a workable model, and the forms and transformations of the model have then to be ‘proved’ in a praxiological exposition. Finally, it has become clear that much of the detailed creative work implied in the previous formulation of the project is, to be realistic, of a postdoctoral nature. Therefore, the Ph.D. problem has been focussed even further.

The focus is on the development of a multidimensional expression of museum design in the form of a theoretical model and an appraisal of its implications for general theory in organization and design. This involves (1) Background theory – a survey of concepts and theories in modelling, (2) Focal theory – a critique of existing notions of organization and Praxis in museums and in Design, (3) Model theory – the development and presentation of a more adequate scheme, and (4) Contribution – the evaluation of its potential as a generalization.

### Background Theory

In the first part of the programme it has been necessary to

ask a specific question about Philosophy – does any specific paradigm offer an adequate conceptual scheme and ‘language’ in which to work? And if not, what do so-called *post-Philosophical* approaches – radical pragmatism, ironism – have to offer in terms of a workable strategy, perhaps one that is recognizably ‘designerly’ in approach.

In addition the definition and clarification of a wide range of incommensurable notions of ‘space’ has had to be undertaken to be clear that the complexity with which design, in the generic sense, engages has a particular character which is quite distinct from that of disciplines such as Science, History, and Politics which are traditionally inclined towards epochal paradigmatic solidarity and towards contingent epistemological coherence. The designer is, arguably, more of a chameleon than is the scientist or the historian or the politician, more so even than are the novelist and the ethnographer whom Rorty cites as latterly more crucial figures.<sup>1</sup> This ‘quixotic’ aspect of the designer’s position is crucial to any argument about personal integrity and social value: this enigmatic journeyman and traveller follows a lonely path guided by emotional (instinctual) as much as by intellectual and practical imperatives.

### Focal Theory

The second part of the programme has involved two operations: (1) a critical investigation, in some detail, of the discourses of organization, design and museography/museology; and (2) an opening up of the intervals between them, that is, an exploration their three interfaces – organization-design; design-museum; and museum-organization.

1. *...it is the disciplines which specialize in thick description of the private and the idiosyncratic which are assigned [the job of fostering solidarity] ...In particular novels and ethnographies which sensitise one to the pain of those who do not speak our language must do the job...*

RORTY Richard. *Contingency, Irony, and Solidarity*. Cambridge University Press, 1989. p.94

## Model Theory

The second part of the programme is drawn towards the final part by proposing a visible constellation of spatial concepts and exposing the tensions, which characterize their performativity. In this the adequacy of the proposed model is evaluated in terms of the specific context of the museum as an organizational type – a creative-administrative nexus – and in terms of its potential value as a generalization. This latter point has involved consideration of the possible ‘museal’ quality of organization in general and a reappraisal of the values of design above and beyond the institutionalized professionally delineated and administered discipline of Design practice.

## Contribution

The conclusions emphasize the difficulty of boundary crossing enterprises such as this project. A considerable effort has gone into deferring the synthetic instinct that all theory tends, sooner or later, to exemplify. However, not just for the sake of form, I make clear some specific and critical points in relation to the ‘new’ space established by this investigation of museum-design-organization.

The museum design discipline has good reason to expound a communication-led collaborative philosophy and to have the strength to develop its discourse in more sophisticated intellectual circles.

In general there is a central message that emerges from the museum-design-organization complex which in one sense bolsters the ironist/new pragmatist stance in engaged theory but also reminds us that to be engaged one must develop skills and capacities that are independent of



the logics of language, that are irrational and yet invaluable.

And in future the interdisciplinary (as distinct from the multidisciplinary) platform must speak its name and be generous. If one is met with incomprehension, resistance, threat response, or out and out hostility one has failed to understand the nature of design. One does not wait to be invited in; neither does one go straight for the jugular. One makes a home, a communal place, a common ground. One finds the hearth and kindles in it a new flame, a new light. One arranges a meeting of minds prepared to enchant with and to be enchanted by new visions and new stories. And one helps each soul along its journey with no more than a gentle nudge in a promising direction in the certain knowledge that the whole process will need to be repeated tomorrow and that this will remain the case for each tomorrow.

### 1.3 On Writing and Reading

1. The activity of writing is constrained by its practicalities: proficient keyboard skill has no logical connection with linguistic proficiency and neither of these with the condition of either having or not having something worth the writing. The consequence is a paradox: the act of writing, even in its least interrupted moments, may result in statements that fail to hang together as one would wish. Equally, the most fragmented process may beget an apparently seamless text of irresistible power. In William Burroughs' *The Naked Lunch* Hank and Martin, two young writers, argue the point over coffee:

H: ... *To re-think a flow and a rhythm, a tumbling out of the words, is a betrayal. That's a sin*  
Martin ...

M: ... *I don't accept your catholic interpretation of my compulsive necessity to rewrite every single word at least a hundred times. Guilt is the key. ... Guilt re not considering everything from every Possible angle ...*

H: *Well how about guilt re censoring your best thoughts, your most honest, primitive, real thoughts?*

[from the film *The Naked Lunch*, David Cronenberg, 1993.]

If only there could be a real choice between the perfect conjunction of time, place and thought and the certain effectiveness of a fragmentary craft process. The story of *The Naked Lunch* proceeds to explore an extreme dislocation of the writer's conscious intentions from the nature of what he is able to produce.

In the process of writing the flow of words is as certain as is disjunction in the circumstance of its production.<sup>1</sup>

*Michel Foucault concludes that a principled and essential conjunction of [poetic forms and psychological structures] is impossible.*<sup>2</sup>

One can also say that 'disjunction' implies 'conjunction' and 'flow' implies 'interruption': without such implications neither is remarkable, neither can be an issue.<sup>3</sup> In this paper great play is made in the midst of four peculiar discourses – philosophy, organization theory, design theory, and new museology – the writing depends upon objects whose connections are multiple, layered and ironic, or even paradoxical, and I would not wish to impose on this, even if it were possible, a single correct (linear) process of reading.<sup>4</sup> However, something must be said about how the work is written, if only as a preparation for the kinds of disjunction and conjunction the reader may expect to find and as a chance to acclimatize to the flow of the writing and the ways in which it can be interrupted.

These first few sentences are illustrated by some of the characteristic types of note the reader will encounter in the thesis. Note 1 is a discursive commentary – an elaboration of a concept that attempts to make a connection that has specific resonance. In this case three facets of the idea of a 'process of writing' are differentiated – manual skill, articulacy, and intellectual preparedness. The point is made that they are not logically connected, that there is a disjunction between the process of writing and its product. That the former carries no guarantee that the latter will have particular qualities is illustrated with a quote from William Burroughs (via David Cronenberg) whose

2. DERRIDA, Jacques. [1967] *Writing and Difference*. Trans. Alan Bass. Routledge & Kegan Paul, 1978. p.170.

Earlier in the book Derrida says: [Writing] *does not know where it is going, no knowledge can keep it from the essential precipitation toward the meaning that it constitutes and that is, primarily, its future.* (p.11.)

3. The proposition that meaning arises out of difference, that a term is unstable and defined by that from which it differs, in an endless play of *différance*. See below 2.2 Organization - Difference.

4. See: DERRIDA, Jacques. 'Living On - Border Lines' in BLOOM, Harold. *et al Deconstruction and Criticism*, New York: The Seabury Press, 1979. pp.75-176.

Derrida uses a single footnote that extends the full length of the main text. This parallel text purportedly addresses the translator of the work in a text which, though it must itself be translated, uncovers the untranslatability of all texts. In fact, Derrida primarily addresses the reader even though what is read, if Derrida is to be taken at his (?) word, is bound to be, at least in translation, not quite what he meant to say.

This thesis presents a similar paradox in the necessary relationship between writing and reading. Reading cannot be simply a process of playing back the writing. Reading itself involves a form of translation - one which renders differences in, what Rorty calls, 'final vocabulary' peculiarly potent. As long

existential insight and creative genius provide a particularly cogent expression of the central point. The second note is a straightforward reference to the source of a quote. Often I might add qualifying commentary to such a reference particularly if a special use is being made of an idea that might otherwise look out of place.<sup>5</sup> Note number 3 is a cross-reference, in this case forwards in the text, to the point where an important concept is explicated. To make too detailed a use of the concepts of 'difference' and '*différance*' at this stage would cause a hiatus in one thread of the argument: elaboration is therefore deferred and the deferral pointed out. Where links backwards in the text are made, this is to avoid unnecessary repetition at the same time as facilitating a reader in recapitulation. Note 4 is a reference to which a discursive commentary is added. In this case, a lengthy discussion in the critical literature, concerning a theoretical difficulty in the relationship between reading and writing, is called upon to add credibility to an approach that might otherwise seem to make unreasonable demands on the reader.

There are sequences in the paper where the notes run on ahead of the main text. Although the 'main text' is certainly composed to carry the key elements and thrust of the argument it is also true that the elaboration of, or commentary on, the text occasionally necessitates a mass and momentum of its own and, indeed, may come close to challenging for the reader's attention as the 'main text'. Whatever happens to the notes, therefore, it could be said that the 'main text' always catches up, takes over, overtakes. The purpose of this conceit is to point up a fundamental issue, that of linearity in process.

Writing may be thought of as a process of organization - of organizing meaningful statements into

as what I write is worth the reading there must be the possibility of 'different' readings.

5. In this instance I might add that: although Derrida's context is that of the ironic closeness of two disjoined discourses - critical discourse and clinical discourse - the Foucauldian point applies more directly here to a disjunction in the process of writing between cognitive processes (the internalized) and the form of expression (the externalized).

6. Philosophers who proclaim the primacy of speech over writing - 'the existentialist fastens his attention primarily on the spoken word' [MAC-QUARRIE, John. *Existentialism*. New York: World Publishing, 1972. p.110.] - in so doing proclaim also the primacy of action over thought, of freedom over conformity, of creativity over interpretation, and of Being over *having*. The speech act happens, has its impact and is over and lost in the past before anyone can do anything about it whereas whatever foolishness finds itself committed to paper is also likely to find itself trapped in a perpetual present and open to this and every subsequent generation's critical attention.

7. LAWSON, Hilary. *Reflexivity: The Post-modern Predicament*. London: Hutchinson, 1985.

extended exposition. We expect a text to read in a certain way, to make sense if we start at the beginning and read on methodically to the end where we expect to find some form of closure - an end to the story, a conclusion to the argument, an evaluation of the evidence. We assume that the structure of a text is the result of an intentional process of writing and therefore that writing itself is ideally linear with a beginning, a middle and an end. But are such expectations always reasonable? Is linearity inevitable or is it simply a (usually useful) artifice?<sup>6</sup>

When posed with the task of investigating phenomena that inhabit or construct some non-linear reality, one enters into the realm of non-linear possibilities. In the postmodern frame of praxis the relations in discourse become reflexive. They turn upon themselves and lead to circles of reference, which quickly become littered with paradoxical moments, discontinuities, indeterminate terms and Gordian knots. Such is the character of philosophy when it reflects on its own language. Similarly it is that of organization theory that reflects on its own organization, of design theory that reflects on its own design, of museology that reflects on its own museality. In each case what breaks down, with the attention to the terms of its own expression, is the certainty of the *a priori* in the discourse and, as a consequence, the acceptability of the given in practice.<sup>7</sup>

Immediately one enters the marketplace of ideas with an exposition on the idea that theory, organization, design and museum as processes may all have not merely parallel attributes and meanings but may be interpretable as held in some recognizable pattern of being, as facets of a mercurial metatypic process, and as each other's best model and thus, unavoidably, as each other's best elaboration and commentary, reference and source, then the process of

writing and that of reading are made highly problematic.<sup>8</sup> Strict linearity is a poor option and yet one is constrained by the sequential implications of any grammar: the initial sequencing of material on the page is both a temporal analogue – a notation for the musical in speech – and a spatial analogue – a graphic display.

The episodic character of this paper, therefore, is not, as it might first appear, a straightforward chain of events: it is a drystone-walling rather than a brick-laying exercise. In the structure, each partial, unequal and tenuous course, each ‘dis-course’, touches others to form a progressively broader interlocked pattern of spaces, a network that is criss-crossed by interacting diagonal lines of force each delineating a meaningful tension between distant material, each relying on counteracting lines for its place and purpose (Figure 1.3.1). Such a construction is an *assemblage*. The drystone wall does not become uniform and concrete in the way that the brick wall does: incom-

8. ADORNO, Theodor. [1966] *Negative Dialectics*. Trans. E. B. Ashton. London: Routledge & Kegan Paul, 1973.

*No theory today escapes the marketplace. Each one is offered as a possibility among competing opinions.* [p.4.]

Adorno's comment on the problem of accumulated conceptual capital in science applies as much to organization, design and museum praxis:

*What resembles writing in such constellations is the conversion into objectivity, by way of language, of what has been subjectively thought and assembled.* [p.185.]

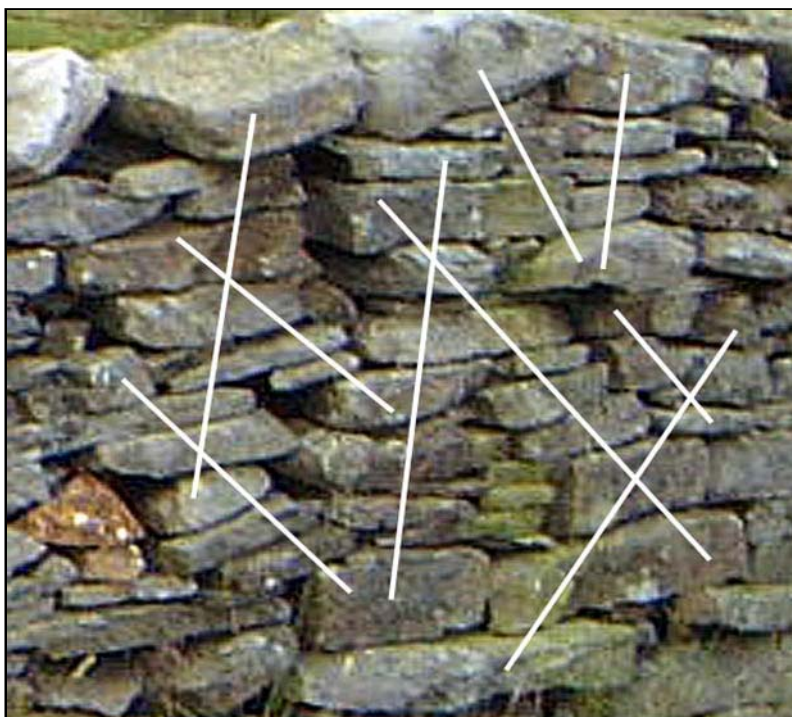


Figure 1.3.1

The partial, unequal and tenuous courses of the drystone wall.

measurable discourses may not be enmeshed in a meta-discourse. Each retains a narrative identity even when put to allegorical use.

The question of what sort of foundations, if any, should be established before beginning the 'drystone wall' is addressed in section 2 and follows this introduction. It takes the form of an exegesis of spatial theory. The conclusion I have come to is not quite as extreme as that of the author's character in *The Naked Lunch* (William Burroughs) when he advises his young writer friends to 'exterminate all rational thought!' However, something of the existential spirit behind it occurs to me: drystone walls require no special foundations: the 'ground work' is very basic. What matters most is a supply of choice material and a dedicated openness to its possibilities as the building of the wall proceeds. Getting a feel for such a selection of material forms the substance of the tract. It explores the discursive construction and visual modelling of the conceptions of physical, social, documentary and paradigmatic space.

Section 3 opens up the three discursive locations – organization, design and museum. Section 4 makes a series of excursions between various pairs of these locations – organization of design, design of museum design, museality of organization. And section 5 travels further afield, crossing earlier traces and exploring the edifice as a whole.

If some pattern emerges in this arrangement of disparate elements in time it may become familiar in the same sense as is a constellation in the night sky.<sup>9</sup> The imaginary lines of force threading back and forth through such a structure are orchestrated to form a memorable complex. But, there is nothing obvious or automatic about such 'force fields'.<sup>10</sup> They are invisible and impermanent:

9. JAY, Martin. *Adorno*. Fontana, 1984. p.14-15.

10. *ibid*.

they may be easily disturbed with potentially catastrophic consequences for the visible and tangible artifices in which we choose to live.

## Voice

The artificiality of the disinterested academic style of writing is clear enough. The origins of this project include, among their moments, a period of rage, which was expressed above in a more committed personal style of writing than one might reasonably expect to find in a doctoral thesis. I hope the point was made that, although not about to engage the sympathies or committed support of those in society at large who are subject to oppressive and marginalizing powers, in a small way, the experience of an exclusion and distortion of my identity-defining competence in a specific institutional context deserves some recognition. Beyond the autobiographical statement above, I have tried to resist the temptation to adopt the kind of ‘personal’ voice that Spivak was able to justify in the context of a debate on marginalization.<sup>11</sup> The ‘centre’ from which power so definitively emanates and yet which always remains so hard to pin down is reflected for me, as it is for Spivak, in the absence of certain voices – the committed voices that are able to celebrate, and through celebration to define, cultural difference. Spivak needed to respond with a refusal of the supposedly neutral and ‘objective’ discourse of academia. I knowingly refuse such a refusal: it would not serve the project at hand to dominate its reading with a ‘marginal’ matter. It is sufficient to set out the new ground in a more or less conventional academic style: the fact that it is ‘new ground’ is celebration enough.

11. SPIVAK, Gayatri Chakravorty. "Explanation and Culture: Marginalia" in FERGUSON, Russell. et al (eds.) *Out There: Marginalization and Contemporary Cultures*. New York: The New Museum of Contemporary Art & Cambridge Mass: MIT Press, 1990. pp.377-93.

## 2.0 Space and Theory

### Introduction

In relation to spatial theory it is necessary to distinguish between the functions of ‘metaphor’ and of ‘model’. In the discourses of organization and of design one may observe a rich metaphorical content which borrows its terms from the language of spatial relations.

People take up or hold *positions* in an organization which may be *above* or *below* others. They either *fit in* or are *out of place*. They may have many or few *contacts* work *alongside* others or in *isolation*, cover little or a lot of *ground*, have a large or small *area* of responsibility, lead or lag *behind* the *field*, feel *small* or be too *big* for their boots, be too concerned with *internal* or *external* matters, fear being *squeezed* or *over-stretched*, etc.

In narrative descriptions of a social situation we often rely on a sustained spatial metaphor that draws our attention to the structural and relational aspects of the situation. This is not the only common type of metaphor: we also regularly encounter militaristic language - the language of strategy, tactics, forces, attack and retreat, weapons, cut and thrust, no-man’s-land, entrenchment, canon fodder, rank and file, etc. - which draws our attention to the competitive nature of a situation. Neither is it necessarily always the most useful: in some quarters physiological, familial and horticultural metaphors hold much greater sway because their various emphases - on , for example, health, obligation, and nurture - point to very different sets of applied values.<sup>1</sup> But, it does put forward an important set of ideas to which we are drawn for other reasons. The spatial metaphor invites us to imagine ‘places’ filled with ‘things’. It proposes a concrete, and therefore physical, conception of abstract relations which is not bound to a particular representational image. It is not

1. See: MORGAN, Gareth. *Images of Organization*. Sage Publications, 1988. Morgan has explored a wide range of such ruling metaphors as images of organization and has identified eight that clearly represent different ways of thinking and seeing. They are organization as: mechanism, organism, brain, culture, politics, psychic prison, evolution and domination.



iconic in the way that the image of the army, the body, the family or the garden are iconic - loaded with a specific representational history. Metaphor is bound to the differential rational nature of language. It concerns, is the very material of, persuasive description. Each borrowed term enriches meaning and furthers understanding by abstracting qualities from the more familiar phenomena of the world and, by analogy, applying them to the less familiar. Such a discursive process of abstraction is, by definition, selective, rhetorical, and political. Therefore it is unavoidably a value-laden (theory-laden) activity - a form of Praxis. Metaphor, of this iconic, sort invites us to recall the image upon which it is based. Spatial metaphor is fundamentally different in the sense that it invites us to construct a new image, a spatial model.

### **Spatial Models**

A spatial model attempts to use a physical entity as the frame for a system of signs. This system of signs comprises a conventional graphic language of points, lines and planes in which can be 'written' a variety of spatial messages. In modelling, therefore, one must distinguish between the absolute space, out of which the model carves its place, and the ideal space that we wish to model which is constructed through a process of semiosis. A spatial model may be defined as: an ideal conception of space constructed in the geometry and possibility of absolute space. What is gained in moving from the linguistic realm of metaphor to the visual realm of the model, is simultaneity, a focus on the holistic, on structure, spatial relations, pattern, form, etc, on an enfolding moment. What is lost is rationality, a focus on the sequential, on

2. See: glossary, and 4.1 below.

3. Although I use the terms 'difference', 'distance' and 'speed of action' in their more generic senses they correspond with the three aspects of any social account of action and space to which Benno WERLEN draws attention:

- the production and preservation of meaning;
- spatial arrangements; and
- the relative importance of the mobile and the immobile.

WERLEN, Benno. [1988] *Society, Action and Space: An Alternative Human Geography*. Trans. Gayna WALLS. Routledge, 1993.

4. See 3.2 below. Typical of design process models based on industrial or professional practice are: RIBA Architect's Plan of Work; the Philips Design Track; and the project management-oriented visualization by Alan TOPALIAN. And typical of those developed by academics are: J C JONES' "Model for a Method of Systematic Design"; Jane DARKE's "Primary Generator Model"; George RZEVSKE's Popperian model; and Allen HICKLING's "Extended Whirling Process".

5. The best known are those of the Royal Ontario Museum [ROYAL ONTARIO MUSEUM. *Communicating with the Museum Visitor. Guidelines for Planning*. ROM, 1976.] and the Natural History Museum (London) [MILES, R S. et al. *The Design of Educational Exhibits*. Unwin Hyman, 1982. and MILES, R S. "Exhibitions: Management for a Change" in COSSONS, Neil. (ed.) *The Management of Change in Museums*. National Maritime Museum, 1985.]

description, explication, history, ethnography, biography, etc, on the unfolding process of narrative.

In this paper 'design' is considered to have four constitutive aspects: the designed object, the object of design, the design process, and design rationale. The designed object generally refers to the end product of the design process, the thing, place, message, system that results from implementation of the design. The 'object of design' generally refers to the 'brief' or 'programme', the practical situation and the 'idea' or 'problem' circumscribed by a system of documentary actions. The design process generally refers to the designer's way of doing design, either the particular process of designing as experienced or the ideal or generic process of design as a conceptual tool. And the design rationale normally refers to the designer's (or researcher's) way of explaining the what? when? how? and, most importantly, the why? of designing. I refer to these four aspects of design as the four 'Ps' - Product, Programme, Process and Philosophy<sup>2</sup> - and they form an irreducible cluster. It is their collocation which is the object of this project in modelling.

In developing a spatial schema to model any particular phenomenon the question one must ask of its dimensions is how well they cope with the visualizing of that phenomenon's possible presences, absences, substitutes and simulations, that is, with the dynamics of spatial relations which are constituted through difference, distance and speed of action.<sup>3</sup>

Although many attempts have been made to provide an adequate model of design,<sup>4</sup> and a few specifically of museum design,<sup>5</sup> not all aspects of design have been treated equally. In the discourses of design the designed object is the most common focus of attention.<sup>6</sup> On occasion this is accommodated in the same view as the

6. Design histories based on the academic tradition of art history arid connoisseurship.

7. For example: DORMER, Peter. *Design Since 1945*. Thames & Hudson, 1993; and SPARKE, Penny. *Design in Context*. Quarto Publishing, 1987.

8. For example: JONES, J. Christopher. *Design Methods: Seeds of Human Futures*. Revised Ed. John Wiley & Sons, 1981; EVANS, Barrie., James Powell & Reg Talbot (eds.) *Changing Design*. John Wiley & Sons, 1982; and CROSS, Nigel. (ed.) *Developments in Design Methodology*. John Wiley & Sons, 1984.

9. For example: PYE, David. *The Nature and Aesthetics of Design*. Barrie and Jenkins, 1978 and POTTER, Norman. *Models and Constructs: Margin Notes to a Design Culture*. Hyphen Press, 1990.

10. For example: ALEXANDER, Christopher. *Notes on the Synthesis of Form*. Cambridge Mass: Harvard University Press, 1984; JONES, J. Christopher. *Designing Designing*. Architecture Design and Technology Press, 1991 (previously published as *Essays in Design*. John Wiley & Sons, 1984.); and MITCHELL, C Thomas. *Redefining Designing: From Form to Experience*. New York: Van Nostrand Reinhold, 1993.

11. LEFEBVRE, Henri. [1974] *The Production of Space*. Trans. Donald Nicholson-Smith. Basil Blackwell, 1991, p.5.

design process.<sup>7</sup> More often, however, the focus on design process is the subject of differently sited and produced discourses.<sup>8</sup> Over and above these, design programme and design philosophy commonly play a subservient role and are either subsumed in a consideration of designed object<sup>9</sup> or design process<sup>10</sup> or discounted from the discourse entirely. One can put the first of these strategies down to what Lefebvre has called “the perfect paralogism” by which he means the crossing from one conception of space to another without regard for “logical links.” The implication here is that different types of space - physical, mental, social - may not be collapsed into each other, but equally they may not be accommodated via some ‘vague justification’ by the invoking of “some such notion as *coupure* or rupture or break”.<sup>11</sup>

In *Cartographies* a different proposition arises: that the mapping process is more than a description. “Mapping, as representation, is inextricably caught up in the material production of what it represents”.<sup>12</sup> This is the light in which the current project should be seen. In the various spaces that are represented by the modelling of museum•design•organization ‘objects’ are fabricated and located in the same moment as space itself is defined. This represents a process of differentiation analogous to the semiotic notion of meaning as ‘difference’ and to the birth of the universe in the ‘Big Bang’ theory.

The latter may suggest a passing cosmological parallel, however, cosmology as such has a broader theoretical range than its use in astronomy.

## Cosmologies

Whether or not there is an order to things is irrelevant to a successful theory of design. Science is founded on the

12. DIPROSE, Rosalyn & Robyn Ferrell. (eds.) *Cartographies: Poststructuralism and the Mapping of Bodies and Spaces*. Allen & Unwin Australia, 1991.

belief that there is an order to things and that through systematic study this order can be revealed. Design, on the hand, is founded on the belief that, whether or not there is a definitive order to things, the perceived world can be purposefully changed. As a radically pragmatic activity then design does not need to resort to a positivist notion of order. However, regardless of contingent ontologies of the positivist and idealist sort, it does require some resort to a faith in human experience, to the role of an intelligent application of perception, memory and skill. What place does this create for the idea of cosmology?

I draw here on the cosmologies proposed by two theorists whose thinking has direct impact on the way design theory has been visualized in the past.<sup>13</sup> Karl Popper supported his theory of scientific progress with a three-world view that brought into play an evolutionary metaphysics under which the actual, the experiential and the linguistic could be made commensurate.

Popper's cosmology<sup>14</sup>

World I	the world of things, physical objects
World II	the world of subjective experience
World III	the world of statements

John Warfield also proposes a three-part 'cosmology' which, although it apparently parallels the Popperian structure, does not necessarily entail commensurability.

Warfield's Cosmology<sup>15</sup>

Residue	everything except the Phaneron and the Library
Phaneron	everything present to the mind, thoughts and ideas
Library	everything recorded in some media form

Popper defines *World I* as a straightforward matter of 'physics', material reality. Warfield defines the parallel realm of the Residue in negative terms: one must refer to

13. See 3.2 below.  
14. POPPER, Karl R. [1972] *Objective Knowledge: an Evolutionary Approach*. 6th edn. rev. and expanded. Oxford University Press, 1981.  
15. WARFIELD, John N. (George Mason University) 1986?

the definitions of the other two realms in order to mentally construct what else there may be to the world. Popper's realism is thus matched by Warfield's indeterminacy which is at least a deferment, a pragmatic gesture, but may also represent a radically subjectivist/relativist manoeuvre.

*World II* Popper defines in straightforward existential terms, which presuppose a direct relation between the physical world and the existent: experience is subjective but dependent upon the existence of an objective material reality. Warfield defines the *Phaneron* in more open terms, ones which do not exclude the phantasm and the phantom from the realm of the 'visible'.

In *World III* Popper makes the act of speech the definitive condition of knowledge. Warfield, with the idea of the Library, privileges the written, the recorded. A contradictory tension is set up here. One might have expected Popper, with his practical orientation, to be most likely to settle on an externalized notion of language as the semiological, the sign system, and Warfield to be inclined to an internalized notion of the semantic, the meaningful. I interpret the apparent mismatch of emphases not as aberrations on the part of either Popper or Warfield, but in each case as attempts to square their respective circles of thought. Popper in emphasizing speech attaches an immediately social dimension to the material of language: the intersubjective dimension of *World III* thereby adds weight to the experiential subjectivity of *World II*. Warfield in emphasizing the recorded language presupposes the communicable message but insists on a form that is clearly separable from the realm of 'thoughts and ideas'.

If one addresses the question of what relations to the idea of order are represented in science and in design in the light of these two parallel formulations an illuminating pattern emerges. The scientist believes that there is an

order in *World I / Residue* and that this will be evidenced in *World II / Phaneron* and that, as a result, this will be reflected /created in *World III / Library*. External reality, whether conceived in purely materialistic or more ambiguous terms, has a structure, a pattern to it that may be experienced, directly or indirectly, through a mental capacity for cognition, ideation and imagination, and may be represented, however imperfectly, in language and communicated.

The designer believes that *World I /Residue* is open to change by deliberate intervention in practical situations and that the required action can be planned in *World II / Phaneron* and the plan developed and recorded in *World III / Library*. A practical situation, whether conceived of as primarily socio-technical or as socio-cultural or as both, is an incompletely understood object that may be freely acted upon. The designer structures such action by responding to the immanent qualities of current and past experience and by exercising practical thought, and makes communicable and effective the prescription for change through dialogue (negotiation and persuasion) and documentation (description, instruction and specification).

Whether or not an order-of-things exists throughout *World I /Residue*, the designer believes that local order can be created, however temporarily. The contingency of this belief affects the object of design, the practical situation which is open to designerly intervention, but equally it affects the subjective aspects of design process (creative and analytical design thinking) and its intersubjective aspects (design representation and creative dialogue), and it affects the ideological dimension of design, the application of values and beliefs of both rational (conscious, theoretical) and irrational (unconscious, cultural) origin.

## Entropy and Relativity

The designer's position may seem to be set in opposition to the law of entropy which states that in a system in which there is no exchange of matter or energy with its environment there is an irreversible long-term tendency for energy (and, therefore, matter) to become randomly and evenly distributed and, therefore, for an ultimate state of inert uniformity, an absence of form, pattern and differentiation, a *telos* of meaninglessness, a heat death. However, such an opposition is based on a proposition in classical thermodynamics that fails at the first hurdle: in the practical situations in which the designer operates matter and energy are readily exchanged with the environment and the time frame is relatively short. In design, for this reason if for no other, the biological metaphor of open organic systems provides a better starting point than does the physical metaphor of closed mechanical systems, and it tends to develop into the ecological metaphor of interdependent complex systems.

In the world of human experience biological and socio-cultural/socio-technical systems tend to exhibit negative entropy: they tend to project towards life in ever richer forms and towards integration.<sup>16</sup> This proposition is supported in schemes as widely divergent as psycho-analytic theory, Richard Dawkins' revision of evolutionary theory, and the mathematics of complexity and chaos.

I suggest, therefore, that the designer's position is opposed to hard systems and mechanistic views, tends to be ambivalent towards soft systems and organismic views and, ultimately, is only consistent with ecological and holistic views of reality in which physical, social, psychical, documentary and conceptual phenomena inhabit the parallel, interdependent spaces that constitute complex

16. Hassard connects this thesis with the exemplary "generic social systems approach to organizational analysis" of KATZ and KHAN whose management textbook *The Social Psychology of Organizations* (New York: John Wiley, 1966.) was "the most influential" during the 1960s and 70s.

[HASSARD, John. *Sociology and Organization Theory*. Cambridge University Press, 1993. pp.45-6.]

systems.<sup>17</sup> Even small-scale design, whose objects may be relatively uncomplicated, deals with complexity in the sense that those objects inhabit a multidimensional constellation of spaces. To re-differentiate this multidimensionality is to define the complexity of design qua design. It is to (re)construct the spaces of design phenomena. Therefore, in the modelling process, spatial concepts become the central object of the visualizing activity.

### Visualizing Space

There is no straightforward correlation between a perceived reality and a constructed representation, at least not in absolute spatial terms. The model, as much as the pictorial or sculptural representation of iconographic art, is the realization of a particular topological transformation and through this the abstraction of particular qualities and relations from the differentiating field of perception. Pictorial perspective, for example, fixes in a two-dimensional plane an image that preserves selected three-dimensional spatial relations between the monocular observer and the observed (perspective is immediately relativistic). The topological transformation, to follow a Renaissance model, involves compressing points in three-dimensional space onto a two-dimensional plane (Figure. 2.0.1). The plane lies at right-angles to the line of sight and points in three-dimensional space are located on the plane by projecting a line through the point to the observer's eye and recording the intersection of the line and the picture plane.

17. One area of systems theory which attracts attention here because of its transitional or translational position between notions of the biological and social, is Living Systems Theory (LST). Its applications are increasingly in the field of complex systems, systems that combine different levels of living and non-living complexes. See: *Systems Practice*, 8:1, Plenum Press, 1996.]

The problem that needs to be addressed, in relation to a multifaceted phenomenon such as design, is that the kinds of 'perception' involved in constructing its spatiality



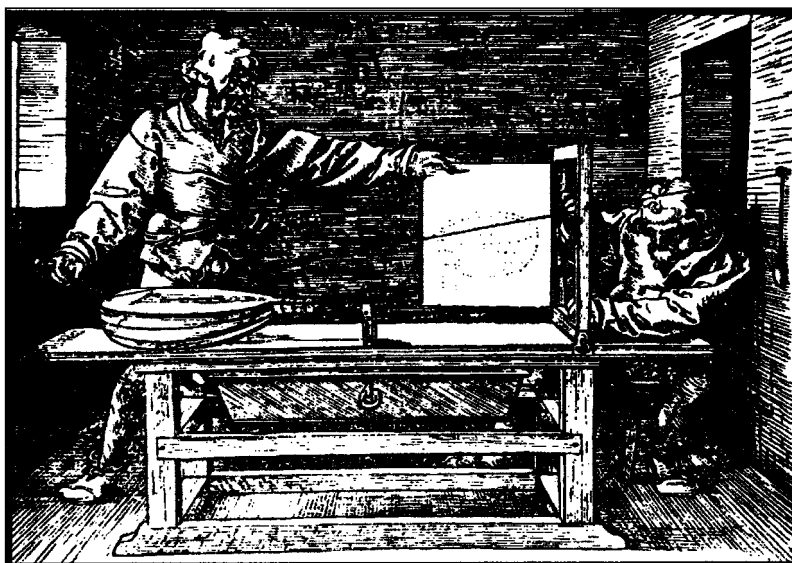


Figure 2.0.1

The artist projecting lines from an object onto the picture plane to render a perspective drawing. From Albrecht Durer's textbook on perspective and proportion, 1525 edition.

18. I am using the term 'perception' here in a way that admits a large overlap with the traditional psychological notions of 'sensation' at one extreme and 'conceptual recognition' and 'comprehension' at the other. It has been admitted for a long time that "these distinctions are unclear and arbitrary".

[WILDING, J. M. *Perception: from Sense to Object*. Hutchinson, 1982. p.26.]

19. The Special Theory of Relativity was published as four papers in the *Annalen der Physik*, 1905. The General Theory was published in 1916. [BERNSTEIN, Jeremy. *Einstein*. Fontana, 1973.]

20. HAWKING, S. *A Brief History of Time From the Big Bang to Black Holes*. Bantam, 1988. pp.179-81.

are radically different to each other.<sup>18</sup> They have no obvious commensurability. For example, the intellect plays a different role in constructing perspectival space than it does in constructing any social space.

### Relative Dimensionality of Physical Space

The move from absolute to relative conceptions of physical space was originally spurred by Einstein's theory of relativity.<sup>19</sup> It now seems that the dimensionality of physical space is itself a question of relativity. If I wish to explain the interactions of snooker balls the classical frame of 3-dimensional space plus linear time are adequate. If, however, I wish to explain distance effects at the subatomic level it seems I may need as many as 10 dimensions.<sup>20</sup> Attempts to account for relativity in philosophical terms were immediately inspired by Einstein's work, for example, the work of the Vienna Circle whose members included Moritz Schlick, Otto

Neurath and Rudolph Carnap.<sup>21</sup> The consequence of Carnap's 'methodological solipsism'<sup>22</sup> was to admit the possibility of a more radically relative conception of physical space: the dimensionality of physical space becomes a question of what is necessary to confirm the principle of 'remembered similarity' as a sufficient basis for the construction of a world description. Carnap chose the notion of 'remembered similarity' because it accorded with the most primitive level of the process of 'perception' (in the broader sense referred to above: see note 18.) Although Carnap's formulation may have been flawed, subsequent work in the philosophy of science has strengthened rather than weakened this particular aspect of 'perceptual' relativity. Popper's elevation of the principle of 'falsifiability' as the criterion for scientific discovery also opened up a future for conceptions of physical space other than the Einsteinian space-time continuum. The Popperian account admits not only 'observable objects' in the construction of physical space but any conceivable object embedded in a series of propositions that has withstood the scientific process of attempted falsification long enough to gain consensual acceptance.<sup>23</sup> More recently the proposition of a radical relativity of spatiality has begun to receive consensual acceptance. What started as an esoteric concern amongst physicists has become a widespread 'feeling' for a multidimensional reality that connects the products of popular culture, Eastern mysticism, globalization in economics, and ecological environmentalism.

*Modern physics has confirmed most dramatically one of the basic ideas of Eastern mysticism; that all the concepts we use to describe nature are limited, that they are not features of reality, as we tend to believe, but creations of the mind; parts of the map, not of the territory.*<sup>24</sup>

What are we to make of the counter-intuitive dimensional-

21. Carnap, who became the best-known representative of the Vienna Circle, studied physics and in 1921 completed a doctoral thesis on 'space' subtitled "a contribution to the philosophy of science". [AYER, A. J. *Philosophy in the Twentieth Century*. Weidenfeld & Nicolson, 1982. p.125.]

22. The standpoint of 'Methodological Solipsism' formed the basis of *Der Logische Aufbau der Welt* [1928] (*The logical Construction of the World*.) in which:

*...he took as his starting point the series of elements each constituting the whole of a person's current experiences at a given moment, and attempted to show how the entire set of concepts needed to describe the world could be constructed stage by stage.*

Carnap's inclusion of the word 'methodological'

*was somewhat disingenuous: it was intended to forestall discussion of the epistemological which the choice of a solipsistic basis might be thought to raise.*

ibid. p.126.

23. ibid.

24. CAPRA, Fritjof. *The Tao of Physics*. Wildwood House, 1975. p.175 ff.

ities invoked by such constructions as virtual reality, acintya,<sup>25</sup> ... and the Gaia hypothesis?<sup>28</sup> Such dimensionalities do not construct the visible in the same sense that spatio-temporal dimensionality constructs the visual appearance of material objects. Each dimensionality is mediated by something additional to the apparatus of looking and seeing. Each is mediated by graphic, three-dimensional and/or electronic-digital means and in this mediation a visualizing process is necessarily entailed, a conscious process of making something visible. It is then upon the graphic, three-dimensional, televisual, etc. products that the visual apparatus operates. And in the process one moves into a realm of spatial exotica.

When looking for what validity visualizations of exotic spaces may have as signifiers one may contrast purely representational interpretations of visual imagery, which would tend to invalidate them, to broader interpretations that allow denotation and analogical reconstruction, as well as visual similarity, a place in art, in visual communication in general. In this sense the model is a simplified, though adequate, analogue that may be visualized. Saint-Martin refers to a

*...new form of iconicity, if the term is used in the Piercian sense of similarity between structural relations and not between superficial attributes.*<sup>27</sup>

25. *...beyond the world of intellectual distinctions and opposites ...where reality appears as undivided and undifferentiated 'suchness'.* *ibid.* p.106.

26. LOVELOCK, James. *GAIA*. Oxford University Press, 1979.

27. CUPCHIK, Gerald C. & János LÁSZLÓ (eds.) *Emerging Visions of the Aesthetic Process: Psychology, Semiology and Philosophy*. Cambridge University Press, 1992. p.61.

Visual appearances only count as superficial attributes: whereas the structural relations underlying visual appearances, such as those studied by cubists, economists and cosmologists, count as deeper attributes that may not be captured in a 'representational' image but may be denoted or analogically reconstructed in graphic, three-dimensional or 'digital' form.

In exotic spaces dimensionality is abstracted by the means of mediation. The analogic qualities of the visualization are determined by the number and type of the dimensions used to construct the total space. And, in terms of dimensionality, the difference or equivalence between one exotic space and another can be determined with reference to a scheme enumerating the dimensional permutations that are possible.<sup>28</sup>

In the modelling of museum design organization three apparently quite different exotic spaces are of immediate interest: social space, documentary space, and paradigmatic space. With the physical space they form a constellation of spaces that holds its pattern only by dint of the tensions between them. The construction of museum•design•organization is embodied in the tensions between particular contents in these spaces, the specifics of ‘location’ and ‘discourse’. The spaces themselves begin as empty possibilities: differentiation of Being constructed in the knowledge and action of social space; visual thinking and communicative activity constructed in the semiotics and graphics of documentary space; normativity and pragmatism constructed in the philosophies and ideologies of paradigmatic space.

28. See Appendix A: Notation.

## 2.1 Physical Space

### Mediation and Construction

In Design the dimensionality of physical space is not an absolute: it becomes a question of what is adequate to the process of changing designed objects. Adequacy here is determined by the criteria of a conceptual-perceptual scheme informed by experience. The experience underpinning design is of successfully projecting the imaginary into physical space and this engages an idea of perception which is mediating and constructive at least in the sense of informing those products of the design process that make designs visible. As such, design drawings and design models embody a contingent knowledge of the designed object and a contingent model of physical space. In these terms content and form are interdependent and open to radical re-conceptualization.

### Mediation: Geometry and Possibility

The validity of the graphic visualization is analogous to that of Cartesian geometry with one crucial difference: it does not rely on a strict commensuration of numerical values and geometric loci. Rather it depends upon a relativistic identification of 'value' with 'place'. Descartes put all of his eggs in the mathematical basket and with the mathematics of his day:

*... could demonstrate how geometry and algebra dovetail each other, how an interchange of ideas is possible by the identification of algebraic correlation with geometrical locus. Numerical relationship can be expressed as a spatial one - lines are changed into numbers and numbers into lines.*<sup>1</sup>

1. DESCARTES, René. *Discourse on Method and the Meditations*. Trans. F E Sutcliffe. Penguin, 1968. p.16 (translator's introduction).

The value of Cartesianism is not that it provides a method

of arriving at the truth nor that it facilitates progress towards the unification and control of nature. Its value is that of a useful tool, that is, of a limited correlative system of knowledge that we may set in the context of broader possibilities of communicative, dialogic, freely negotiated understandings of the world. The key concept in Cartesianism is that of the attribute of 'extension'. It is this attribute that all things have in common and therefore that constructs an homogeneous view of the physical world.<sup>2</sup>

This drive towards a singular, universal, absolute conception of the physical world, arrived at by deductive reasoning, has clearly failed. Even in Descartes own explanation of the scientific method, the 'self-evident' existence of the sovereign rational subject and a theological argument are necessary to support the exercise of 'intuition'. The whole edifice sits on the shakiest of foundations: an idealism rather inconsistent with the method's realist aims. However, in a relativistic framework, Cartesianism is undoubtedly powerful and productive: from it we have developed the widest range of techniques for making the conceptual and the phenomenal visible.

*If the system of Descartes was a failure, Cartesianism as an attitude of mind was both fruitful and enduring.*<sup>3</sup>

In relation to the modelling of the material objects in design their 'ontic' reality is available to us only in the Cartesian sense of a 'body' external to the thinking subject. Such objects actually occupy the absolute space that they appear to the mind to occupy. The effect - visual perception of an object in physical space - being as real as its cause - an actual object 'out there'. Kant's account of the *noumenon* as the 'thing it itself' which is not directly knowable and the *phenomenon* as the sense data that lead us to believe in the existence of such things, offers an

2. *ibid.* p.22.

3. *ibid.* p.23

idealist parallel to the realist account. In theoretical terms these views are poles apart, however, the consequences for visualization are straightforward and not incompatible. In design, Cartesian coordinate systems underpin the two-dimensional orthographic projection and the three-dimensional constructed model (Figures 2.1.1 & 2), and, by

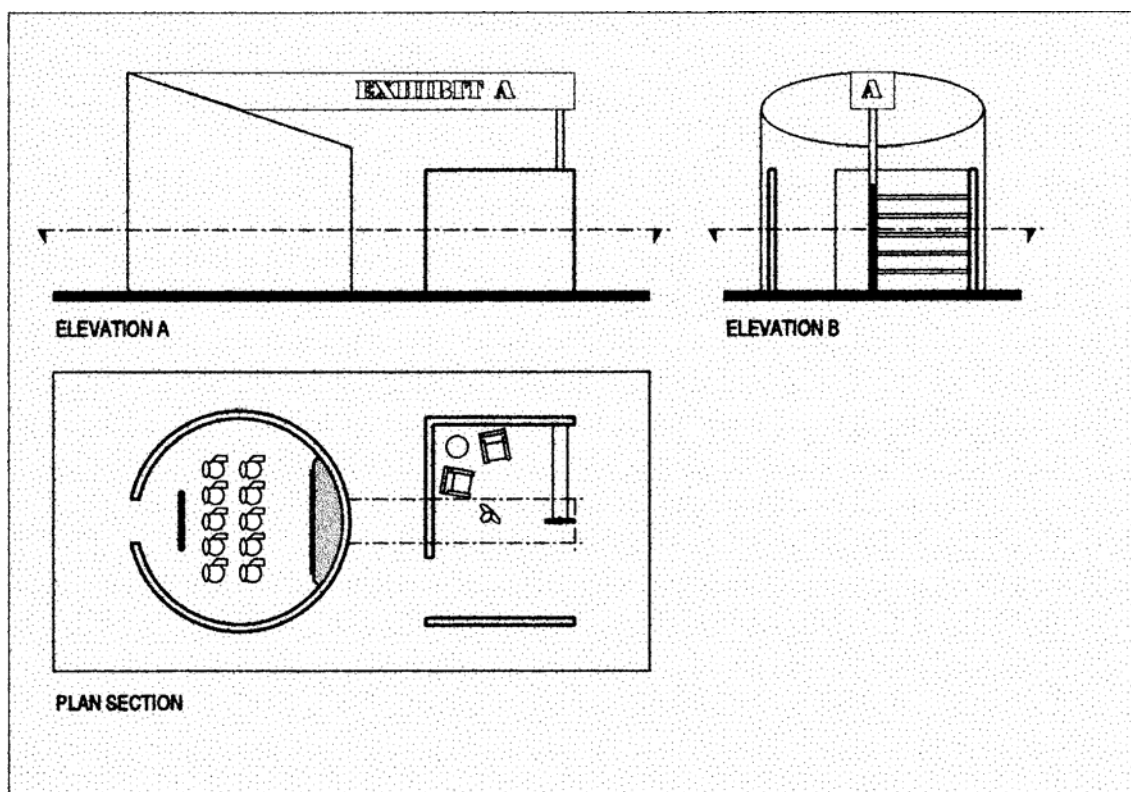


Figure 2.1.1 (above)

Orthographic drawing: a three-dimensional object described with a combination of two-dimensional plan and elevation views.

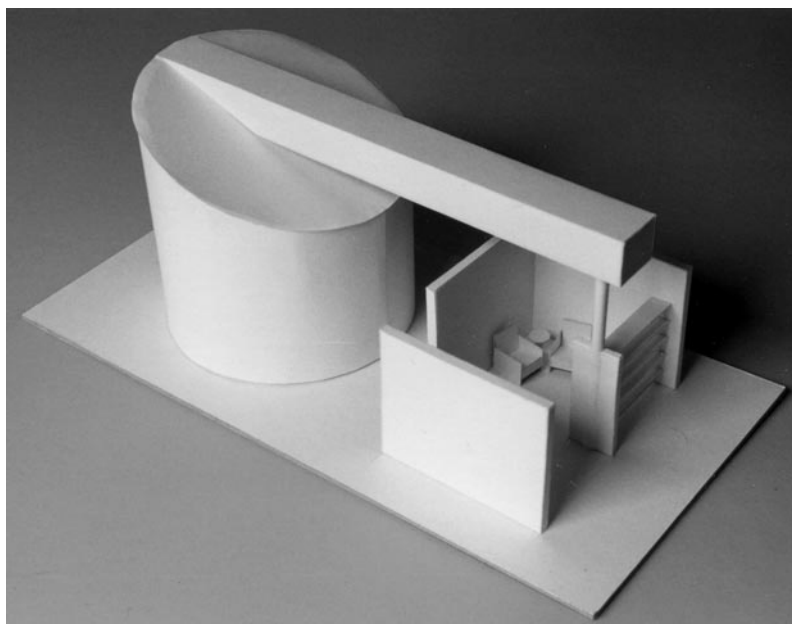


Figure 2.12 (right)

Three-dimensional constructed model

various geometrical transformations of the three-dimensional, generate the two-dimensional oblique, axonometric, isometric and perspective projections (Figures 2.1.3-6.)

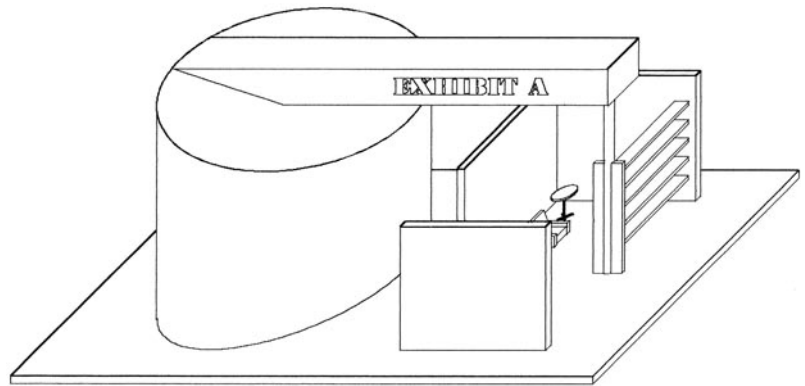


Figure 2.1.3  
Oblique projection

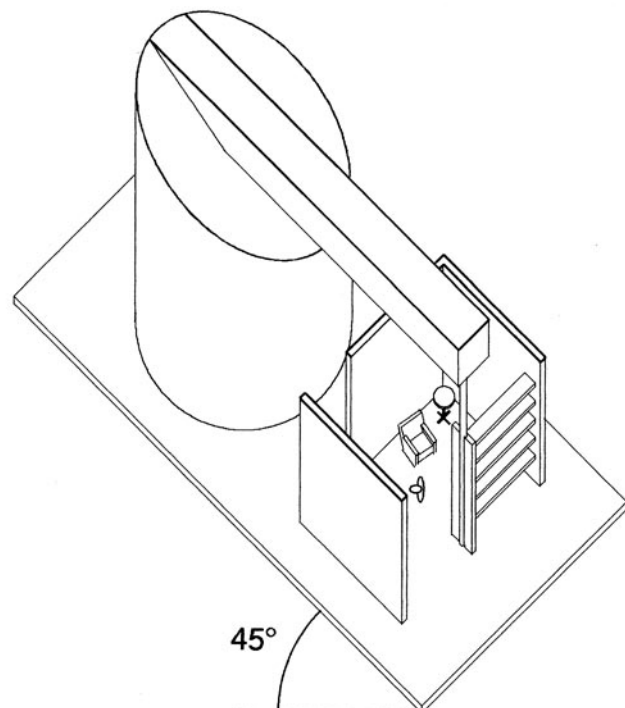


Figure 2.1.4  
Axonometric projection



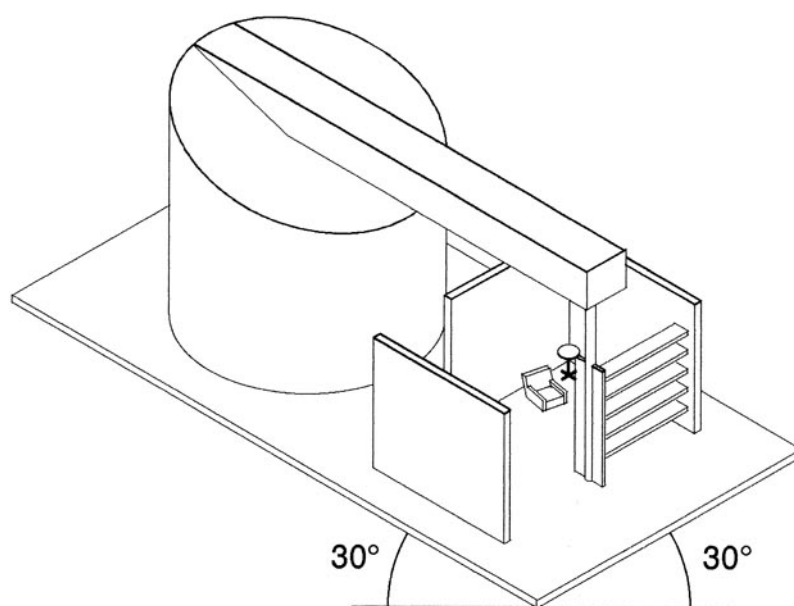


Figure 2.1.5  
Isometric projection

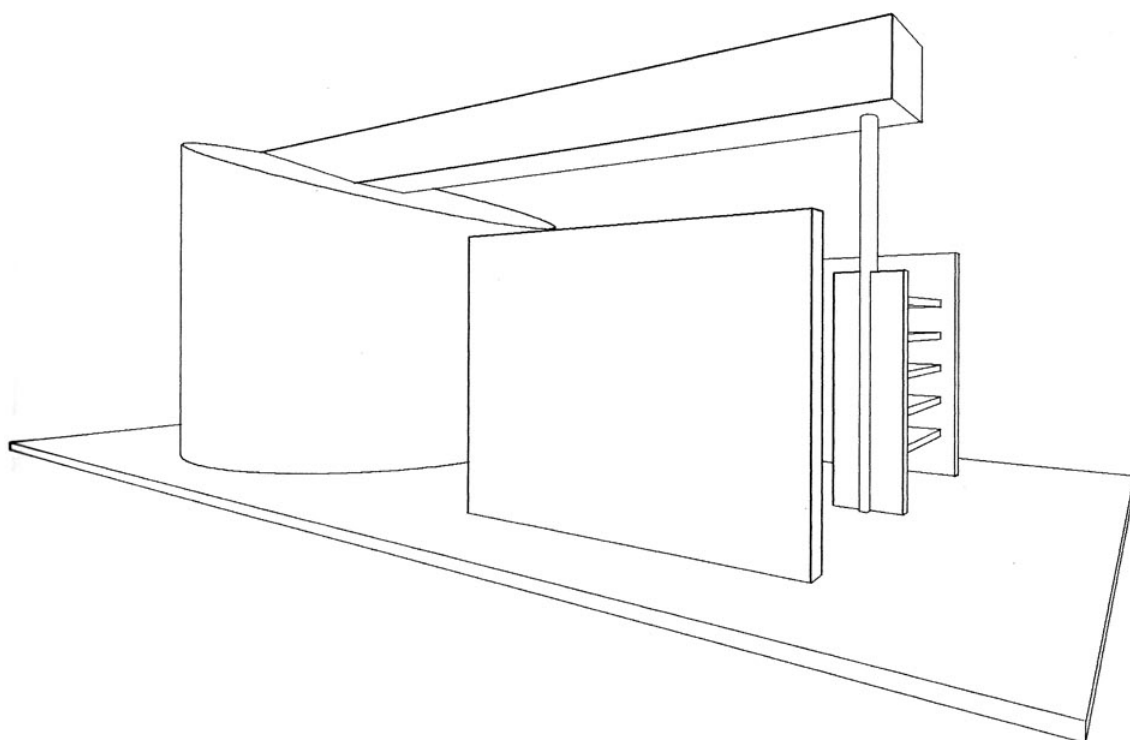


Figure 2.1.6  
Perspective projection

When one comes to consider the relation between the projected object in any visualization and the visualization itself as a physical object one must resort to a reflexive moment. The temporal position of the visualizing process changes the meaning of the image. In a radical sense, the visualized object is a fiction but one which attempts to prefigure an existence or an experience - an 'existence' if one accepts the realist position, an 'experience' if the position one defers to is idealist. In either case a process of projection is engaged that is crucial to the act of visual perception.

There may seem to be a paradox here. Consider two drawings that, to all intents and purposes, appear identical. One may depict a physical object that already exists and the other an object which, as a design, does not yet exist. Are the drawings the same? Is the process of projection in each case the same? The first is a question of ontological significance the second of epistemological significance.

To the first question it seems to me that one must answer a qualified 'yes'. To explain, imagine that one engages a third party to judge on the evidence of the drawings alone. I contend that they would be able to perceive no substantive difference between the drawings as physical objects nor between the marks on the paper that comprise the drawn image nor, given that they are competent to decipher the images, between the objects depicted. Without supplementary evidence as to the circumstance of their production, the two drawings will appear identical. One may also play a trick to prove a point. If the two drawings are actually the same drawing seen at different times and in the interval between the two viewings the projected design in the 'first' drawing is realized as a physical object, then if there is anything different about the drawing it is clearly nothing intrinsic to the drawing as a physical object nor with the marks one reads as an image

nor with the depicted object. Any difference there may be can only be within ourselves or within the larger environment and the result of changed relations therein.

One can say, then, that the quality of analogic reconstruction in any visualization is at least as important as its quality of visual similarity even if the superficial attribute of visual appearance is ostensibly its focus. In the design drawing this is manifestly the case because the process of projection and the working through of a drawing system such as orthographic projection must interactively construct the image through a consideration of structural relations. Although a drawing may make visible only superficial attributes, to accomplish its production a grasp of deeper attributes, whether by analytic or holistic means, is necessary. Ultimately, for any model of physical space embodied in a design drawing to make sense it must be able to account for changing relations in the perceptual process: the projection of a physical reality is not a singular phenomenon.

To the second question: is the process of projection in each case the same? I am, therefore, more certain that the answer is 'no'. In depicting a physical object that already exists, the geometrical transformations of the three-dimensional that one accomplishes are *rational*.<sup>4</sup> They depend upon an approximation of a mechanical process. Once certain parameters are set concerning the drawing system to be used - orthographic, isometric, perspective, etc. - and the orientation of the object to be depicted, the projection involved is one which is essentially predetermined and mechanical in character, that is, it is *reproductive*. However, in 'depicting' a design, as if it were a physical object that exists, there is no three-dimensional original to which one can apply geometrical transformations. The first systematized drawing one produces of a design, therefore,

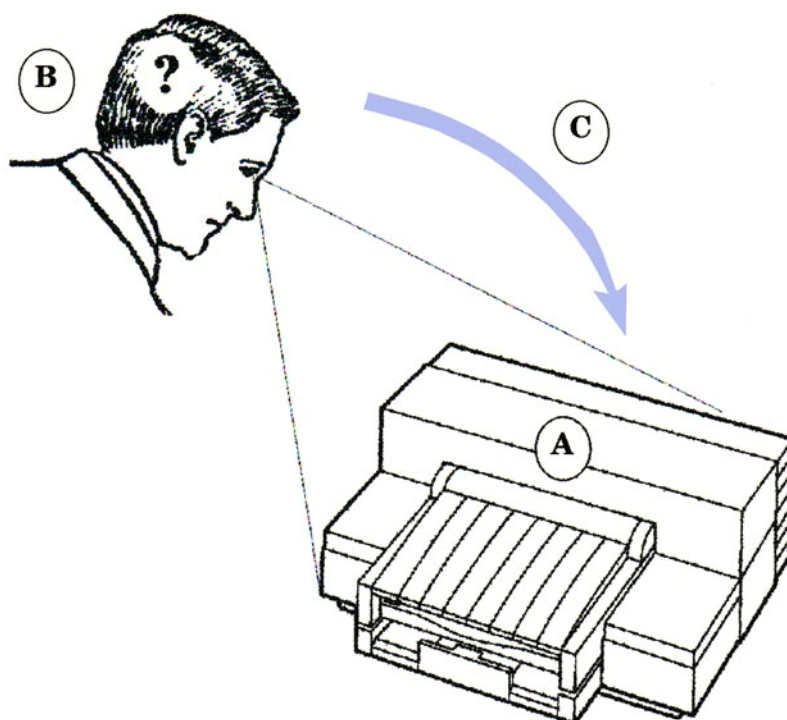
4. I refer here to the narrower sense of 'rational' suggested by the latin root *Ratio* (to compute, reckon, account) which implies a quantitative operation to which there is a correct outcome.  
[*The Concise Oxford Dictionary*, Sixth edn. 1976.]

strictly speaking is the result of irrational procedures: it is dependent upon a sustained act of inventive imagination.<sup>5</sup> The projection involved is one that is essentially creative and perceptual in character, that is, it is productive rather than reproductive.

The concept of 'projection' is clearly central. Max Velmans has summarized accumulating evidence that:

*what we think of as everyday 'physical reality' is, in part, a mental construction arising from an interaction of energies and events with human perceptual processing. One aspect of this processing is the 'perceptual projection' of experienced events to their judged location in three-dimensional space.<sup>6</sup>*

He describes the relations between the external event of the physical object, the perceptual process and the process of projection as cyclical or 'reflexive' (Figure 2.1.7.)



5. I refer here to the specifically visual sense of the word 'imagination': "the mental faculty of forming images ...of external objects not present to the senses", and qualify it with the word 'inventive' to explicitly imply an object "created by thought" that does not yet exist as a physical object. [ibid.]

6. VELMANS, Max. 'Physical, Psychological and Virtual Realities', from the preprinted abstract for the *Embodied knowledge and Virtual Space conference*, Goldsmiths College, London, 1995.

Figure 2.1.7

A model of perception based on Velmans. (A) the initiating physical object/event stimulates (B) perceptual processing and (C) perceptual projection and the latter achieves initial closure of the perceptual cycle.

However, if an external physical object/event is posited as that which initiates the perceptual cycle and a process of ‘perceptual projection’ as that which achieves its initial ‘closure’, one must question whether or not inventive imaginative projection, as identified above, is really better understood as qualitatively different. Even if, in measurable neurological terms, it turns out to be the same type of process, I believe that the difference is worth preserving. This is not because I think science will come to the conclusion that there are different types of ‘perceptual projection’, though it would be neat if it did, but, because in the construction of a theory of design it facilitates an account of its ideological basis. Where the initiating moment in the perceptual cycle is an act of inventive imaginative projection the possibility of things being other than they are, in the most radical sense, is admitted (Figure 2.1.8.)

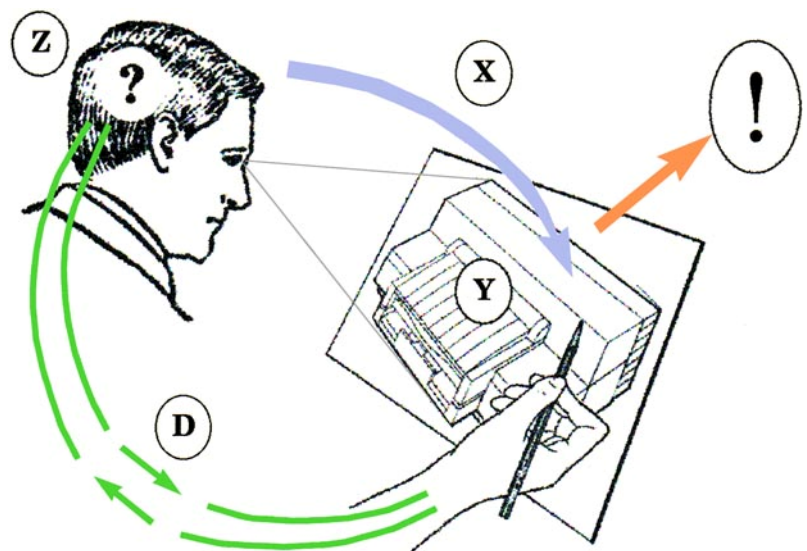


Figure 2.1.8

A development of Velmans' model of perception (see Figure 2.1.7 above) in which M) the initiating event of inventive imaginative projection parallels (D) motor coordination of the drawing hand to produce (Y) the externalized image which stimulates {Z} perceptual processing as an initial closure of the perceptual cycle. The externalized construction of the design drawing holds out the possibility of design realization (!)

And this belief is foundational in design: in general, the designer believes that whether or not there is an order to things, whether or not we have an adequate construction of the world, we can change things for the better.<sup>7</sup> There is, therefore, a very concrete sense in which the possibility of inventive imaginative projection initiates the social and philosophical construction of design. And it is no accident that, as part of an explanation of the creative moment in design, it seems to accord with experience.

If one maintains that the only form of projection that is legitimate is perceptual projection one is left with a paradox. Unless suffering severe delusions one does not mistake things inventively imagined for things that one perceives to exist in physical space. If, as is the argument for perceptual projection, a physical object/event is necessary to initiate the perceptual cycle, then one is left to conclude that, without its own type of projection (one that is able to initiate a perceptual cycle) inventive imagination is itself a delusion. If it is a memory trick, then truly there is nothing new under the sun and we are doomed to endlessly reinvent the wheel - determinism of a prehistoric kind re-emerges. And if some strangely displaced dream, then we delude ourselves to believe that it is possible to distinguish between the perception of physical reality and the dreams we have in the land of Nod - solipsism of the purest self-contradictory kind re-emerges. My conclusion is that we are able to inventively imagine things and to consciously project their presences into the world - artists and designers make a living out of such an ability (in a sense we all do).

The status of the design drawing can now be clarified. As a physical object the design drawing occupies a boundary position. The dimensionality of its physical presence is constructed in much the same way as that of any perceived

7. See above: 2.0 Cosmologies.

object in physical space. The perceptual process is closed by the projection accomplished as an outcome of perceptual processing and the drawing occupies its judged location in three-dimensional space. It takes its place in the world continually confirmed by the perceptual cycle as it repeats. Underpinning the success of this procedure is the contingent model of physical space that binds together the learned experience of seeing things as they are and the intelligent operation of seeing things as we think they ought to be. It is the stability of the model and the mechanics of its transformations that ensure that we retain a grasp on the difference between reality and illusion.

As a depiction or representation of a projected physical reality, the drawing embodies an illusion that one is able to keep separate from the drawing's physical reality. At the same time it is one that one is able to focus on by choice. One can consciously suppress the perception of a drawing, in its physicality, as a piece of paper with a pattern of marks inscribed on its surface, and instead bring to the fore the perception of the pattern of marks and to engage in a 'reading' of the illusion they construct as a projected reality. The design drawing thus establishes a presence for itself in the instant in which it is transformed from a piece of marked paper into an interpretable illusion. The design drawing constructs a virtual object in a virtual space by engaging the learned experience of seeing things as they are. Through a mechanical transformation of our model of physical space it extends the intelligent operation of seeing things as we think they ought to be into the realm of a 'documentary' space.<sup>8</sup>

As a physical object the design drawing is 'useful' in the sense of accomplishing an externalization of the inventive imagination, making the visualization an object which is then itself open to interpretation, transformation

8. See 2.3 below.

and, most importantly, realization. It is 'communicative' in the sense that it may be passed from one to another, it may become the object of collaborative interpretation, transformation and realization - it is the material of a communicative action.<sup>9</sup> And it is 'symbolic' in the sense of embodying in a material code, not only values and beliefs, but, an explicit information content. In the latter we see the rationale of a boundary position between physical and documentary space.

9. Habermas has expounded a whole theory around this idea ([1981] *The Theory of Communicative Action*, Trans Thomas McCarthy, Boston: Beacon Press, 1987.) summed up, according to Bernstein, in an intuition he believed linked himself to Rorty:

*the conviction that a humane collective life depends on the vulnerable forms of innovation bearing, reciprocal and unforcedly egalitarian everyday communication.* [my emphasis]

Jurgen Habermas "A Philosophico-Political Profile", *New Left Review*, May/June 1985, p.12. quoted in BERNSTEIN, Richard J. *The New Constellation*. Polity Press, 1991. p.45.

10. HAWKES, Terence. *Structuralism and Semiotics*. Methuen, 1977.

*Language ...inheres not in 'the material substance of words' but in the larger and abstract 'system of signs'.* [p.245, my emphasis]

In the symbol the relationship between signifier and signified is arbitrary; it requires the active presence of the interpretant to make the signifying connection. And of course, following Saussure, we can say that the major systematic manifestation of signs in this mode occurs in language. [p.129.]

At this point one can see a symmetrical relation in the model of physical space that depends upon the state of perceptual attention to the design drawing. Attention to the drawing as a physical object constructs a three-dimensional physical space into which is enfolded an essential/defining documentary space. In each specific case it is the content of that documentary space that makes the design drawing into more than just a piece of cleverly marked paper, that makes it a harbinger. Attention to the 'design' in a design drawing, to the virtual object, constructs a two-dimensional documentary space into which is enfolded a defining three-dimensional physical space. It is the physical form of the drawing that makes it more than mere information, more than just the abstract terms of a language communicated by arbitrary signs.<sup>10</sup> It connects the 'image' with the sheer physicality of the exercise of practical artistic skills in the process of externalizing and constructing an inventive imaginative projection. In this there is a sense in which design is designed. One must remember that the design drawing is a 'conventional' embodiment of a contingent knowledge and of a contingent model of physical space. Conventions may be superseded: both the physical form of the design drawing and the deep structures underpinning the image may be changed. However, even if nothing so radical as, say, the virtual reality studio supplants the traditional drawing, the



relevance of the connection with the physical achievement of the design process remains. Which ever ways are found of redesigning the form and deep structures of the products of the design process, the crucial quality required of them remains the same: the capacity to 'embody', literally to physically contain and express, knowledges.

### **Construction: Absolute and Ideal Conceptions**

Any account of the notion of 'physical space' is liable to take on positivist overtones. Whether one sides with the out and out realist viewpoint or with those such as Cartesianism, which adopts an idealist element in its genesis, the very notion of 'physical space' posits a realm of observable phenomena. The different theoretical orientations then tend not to disturb a fundamental belief in the perceivable but to disagree about the process of perception. All may be reduced to interactions between differently structured material - molecules, photons, neurones, etc.; a mind-body dualism may be invoked that separates concept from percept, experience from actuality; solipsism may be used, as a pragmatic device, to affirm the primacy of the thinking self - the conception of physical space then entails the thought that the existence of an external world is a reasonable or at least useful assumption even if its reality is unprovable.

For better or for worse the designer is concerned with a realm of observable phenomena and with the idea that 'things', whether in actuality or in some conceptual space, can be changed. The spatiality of the designed object - the design product - becomes immediately multidimensional. The realist formulation posits an actual physical space in the form of a space-time continuum into which various exotic spaces may be admitted as chimera only as long as

their complex structures resist reduction to simpler physical material relations (Figure 2.1.9.)

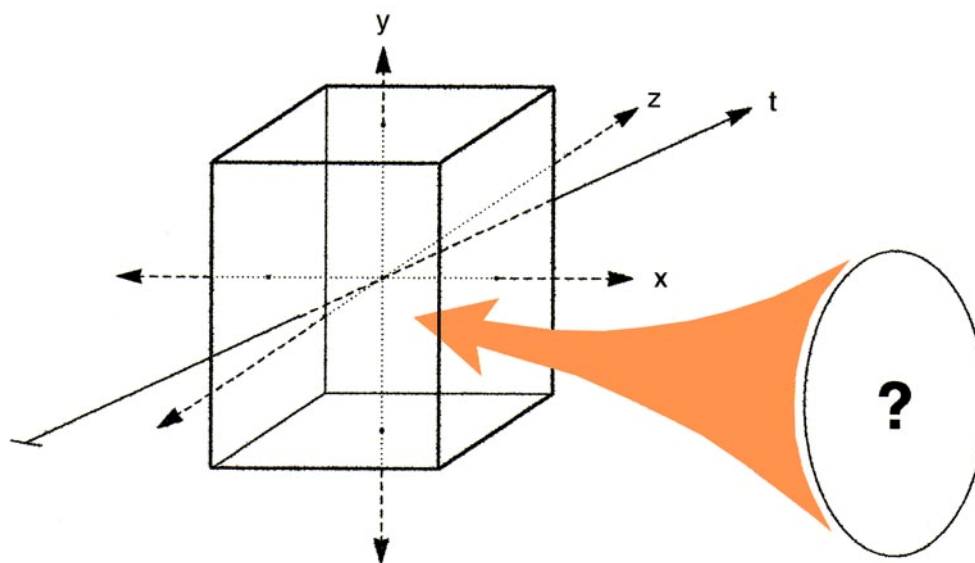


Figure 2.1.9

---

Realist formulation of physical space - ultimately everything is reducible to the spatio-temporal terms of material, physical reality.

---

The Cartesian - neo-Hegelian range of dualisms posits an actuality in symmetrical opposition to a psycho-social space of one complexion or another (Figure 2.1.10.)

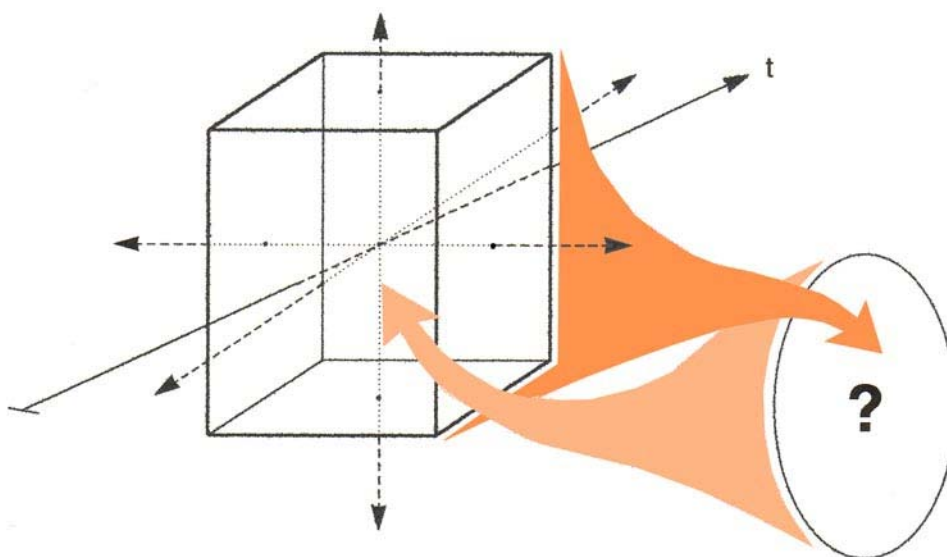


Figure 2.1.10

---

Dualist formulation of physical space- spatiality is always a question of shifting between transformable but incommensurable and irreducible opposites.

---

*When rationalism is blended with idealism, as in the case of Hegel and his followers, reality is identified with a coherent system of judgements rather than with anything outside the system to which its constituents might be supposed to refer. ... the neo-Hegelians Bradley and McTaggart were not afraid to maintain that neither space nor time nor matter were ultimately real.<sup>11</sup>*

11. AYER, A. J. *Philosophy in the Twentieth Century*. Weidenfeld & Nicolson, 1982. p.5.

And the solipsistic turn allows the conception of an inhabited physical space but permanently defers any positing of its actuality (Figure 2.1.11.)

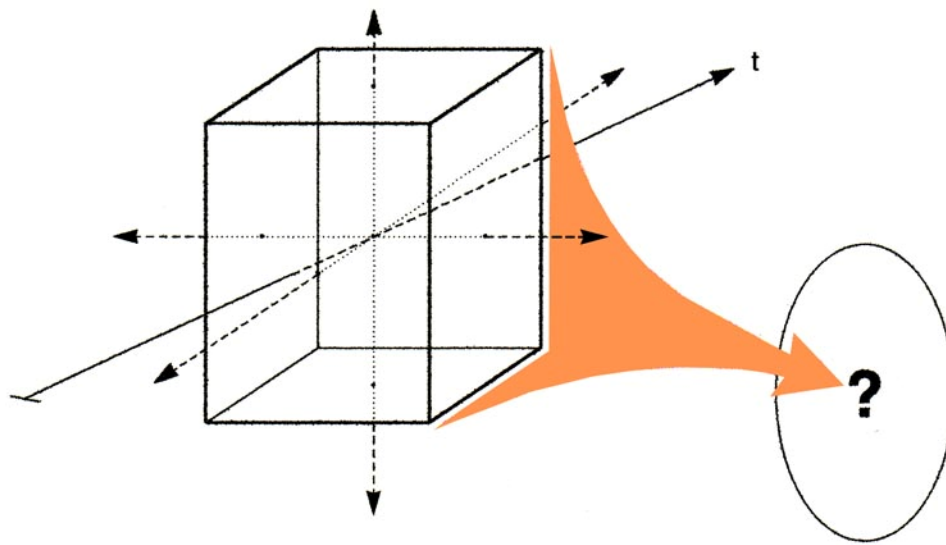


Figure 2.1.11

---

Idealist formulation of physical space- the solipsistic turn places the spatio-temporal terms of material reality in the realm of the conceptual.

---

By ‘extension’ dualist accounts of physical space may be turned into a pluralist one:

*pluralism may take the form of denying that there is a single world, which is waiting there to be captured, with a greater or lesser degree of truth by our narratives, our scientific theories or even our artistic representations.<sup>12</sup>*

### Construction: Pluralist Conception

If one regards each spatial construct as the realm of a different ‘possible’ world then one may visualize not

12. *ibid.* p.13.

merely 'shifts' between the two incommensurable and opposed spaces of the physical world and the psycho-social world but movements between the many worlds:

*... we are able to construct by the use of different systems of concepts, different standards of measurement, different forms of expression and exemplification.*<sup>13</sup>

The importance of the pluralist account of spatiality is in its immediate utility in discourse. Within any given discourse the criteria for legitimating any particular statement are radically different to those of other discourses. We may agree with Carnap that to answer questions of existence, for example, as long as we use appropriate conceptual frameworks we may answer 'yes' every time: physical objects exist, as do numbers and fictional characters. However, if we limit ourselves to:

*a universe of discourse where the criterion for existence is actual location in space and time, then there are no fictional characters and, for that matter, no numbers either.*<sup>14</sup>

Eco's consideration of the designed object isolates three qualities each of which would imply an opposed attitude to spatiality should they be taken in isolation. Of the designed product he says:

*a) First of all the object is meant to be useful ...*

a condition which speaks of the necessity of a formal presence in a physical world of material interactions - the realist notion of physical space operates here.

*b) ... an object should show what its purpose is and how it should be used. In a word, the object has a communicative aspect ...*

13. *ibid.*

14. *ibid.* p.160.

A symmetry is implied between the linguistic interpreta-

tion of physical attributes and the material realization of socially determined practical purposes - the dualist notion of physical space in a reflexive relation to social space comes into play.

*c) ... design has symbolic functions: ... a host of further meanings that allow the object to be used as a mark of social status, power, and so on.*<sup>15</sup>

Physical attributes are seen as signs of cultural meaning that operate independently of any mechanistic notion of functionality - the underlying assumption here is that any notion of physical space is purely conceptual, that is, it is embedded and interpreted in, comes out of a reading of relations in, a conceptual psycho-social space.

Eco, of course, does not propose that we choose between these three 'qualities' of the designed object, nor even that we rank their importance. Rather he suggests that:

- together they represent the necessary dimensions of the 'design' phenomenon,
- "objects that serve their purpose, that declare and communicate their functions and at the same time communicate symbolic meanings"<sup>16</sup> are the embodiment of a certain kind of discourse - design discourse, and
- such correlative qualities are normative in design.

He implies that the betrayal of any of these would constitute a "crisis of the design utopia". Therefore, I suggest, that the pluralist conception of spatiality is inherent in design philosophy, and Eco's interpretation of spatiality in design may be construed, at least in the case of 'Identified Design' - design which is

*the outcome of an expressed theory and of a practice in which the object aims to exemplify explicitly its author's theory*<sup>17</sup>

- as its 'ideology'.

15. ECO, Umberto. "Phenomena of This Sort Must Also be Included in Any Panorama of Italian Design", in ECO, Umberto. *Apocalypse Postponed*. Indiana University Press/British Film Institute, 1994. pp.186-7.

16. *ibid.* p.188.

17. *ibid.* p.186.

This pluralist conceptual scheme for physical space appears to embrace satisfactorily the constellation of qualities of the designed object. The scheme centres on the construction of a conventional space-time continuum in which, in relativistic fashion, one is able to orientate three mutually perpendicular dimensions of space in relation to an 'abstract' observer. The position of this imaginary spectator is implicit in the space's initial conceptualization but, when a content is visualized in graphic form, is made more or less explicit depending upon the drawing system used. This conceptualization of a three-dimensional physical space projecting along a time line then has enfolded into it or is enfolded into a variety of social and psycho-social spaces of more or less exotic conception that connect the physical object directly with the arenas of life, and with the documentary and paradigmatic spaces that connect with perceptual processes (particularly inventive imaginative projection) and with epistemological and ideological positions respectively (Figure 2.1.12.)

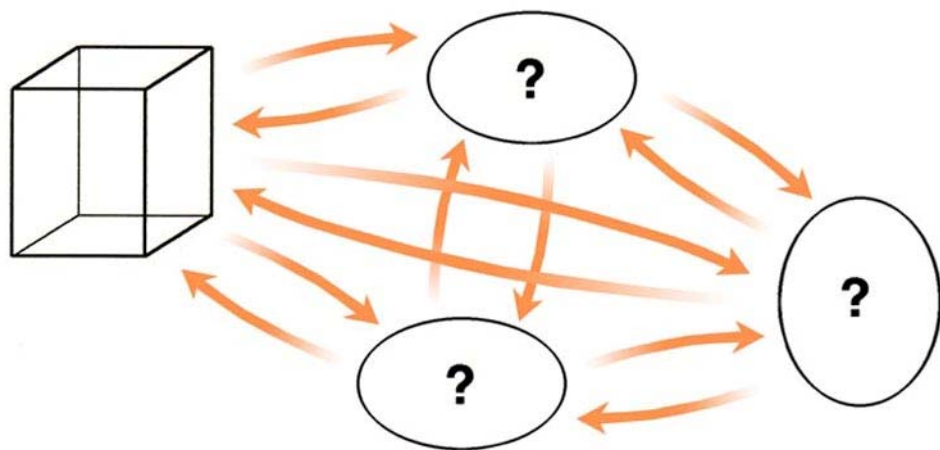


Figure 2.1.12

---

Pluralist formulation of physical space: physical space and many other incommensurable and more or less exotic spaces coexist as the possibilities we may construct, utilize and explore.

---

## 2.2 Social Space

### Social Topology

The Greek idea that nature comprises one vast living organism<sup>1</sup> connects with the post-industrial, ecological notions of nature and with social constructionist notions of system. In both cases the human is not privileged above, not separated from, nature. All 'actors' have equal potential in a system and all interactions are of equal value. The human is de-centred. The peripheral notion of 'boundary' or 'interface' becomes the centre. Interfaces depend upon difference and speed of action for meaning.

In describing the relations between people and between people and things, which together comprise the 'actors' in a system, distance in absolute terms is irrelevant for all distances are transformable without in any way affecting spatial relations:

1. AYER, A. J. *Philosophy in the Twentieth Century*. Weidenfeld & Nicolson, 1982. p.207.

2. CUPCHIK, Gerald C. & János LÁSZLÓ (eds.) *Emerging Visions of the Aesthetic Process: Psychology, Semiology and Philosophy*. Cambridge University Press, 1992. pp.56-7.

*The genetic epistemology of Piaget (1948) has established that in the evolution of human beings topological relations are the primary and constant matrix of spatial constructs.*<sup>2</sup>

3. In cosmological terms the notion of 'absolute' distance has been rendered redundant. The relativistic conception of a space-time continuum in physics, the differential conception of linguistic space in semiology and deconstruction, and the organismic, ecological and open systems conceptions of social space, ensure that position and sequence of perceived events are only comprehensible in the context of a posited process of construction and reconstruction which by implication determines the values of perceived distance and speed amongst other qualities.

What does matter is the type and relative force of any interaction across the space of the system and, in any system of multiple interactions, the pattern of forces or 'force field' that may hold a group of actors in a perceived set of spatial relations. One should remember that what matters is the spatial relations as a perceptual construct and not as an independent 'ontic' structure describable in terms of absolute distances between elements, the terms of a Cartesian geometry.<sup>3</sup>

If we consider the nature of various interactions in any organizational context it is possible to determine in relativistic, though not absolute, terms speed, force and

rapidity of interaction, and, given these notions, to picture the kind of space in which to visualize these perceived qualities.

In the anthropological view the 'act' holds a central position in defining culture. According to R H Mead, a favourite philosopher of the 'pragmatic' anthropologist, "the unit of existence is the act ..." <sup>4</sup> Nature acts on us and we act on nature. Between living organisms this equates to a conversation of gestures in which "animals respond to each other's responses." The peculiarly human response, at least in so far as its complexity and subtlety are concerned, is the vocal gesture of speech. Thus exteriorized and objectified in language, the gesture becomes subject to reflection and interpretation, and becomes reflexive: we may meaningfully gesture to ourselves and make the object of such reflection the understanding of and construction of a self, and by extension of the Other.

The material cultural object has been described as a "collapsed act": an artefact once

*embedded and indistinguished from the rest of nature, fixed first by sight and then by the magic of the hand ...* <sup>5</sup>

4. MEAD, R H. *The Philosophy of the Act*. C W Morris (ed.). Chicago: University of Chicago Press, 1972. p.65. quoted in RICHARDSON, Miles. "The artefact as abbreviated act: a social interpretation of material culture" in HODDER, Ian. (ed.) *The Meanings of Things: Material Culture and Symbolic Expression*. Harper Collins, 1989. p.173.

5. *ibid.* [RICHARDSON] p.172.

6. [The Id] *...is the area from which internal feelings and desires emerge from the instincts*. BOCOCK, Robert. *Sigmund Freud*. Ellis Horwood, 1983. p.77.

is brought into play as the medium of deferred and distanced gesture, and therefore as the carrier of meaning.

In social terms the act is definitively communicative, it is a response and it elicits responses. The most direct relation between actors is one in which the body confronts the body unmediated by the distancing gestures of either language or material culture. Through the interplay of unselfconscious physical responses the carnal realms of existence serve our most basic physical and emotional needs. In Freudian terms such action is at the instinctive level of the Id.<sup>6</sup> However, even the most 'physical' of social interactions are normally overlaid and structured by ritual



7. MARCUSE, Herbert. *Eros and Civilisation*. Routledge & Kegan Paul, 1966. p.12.

8. Marcuse educes the social dimension of this 'reality principle':

*The reality principle sustains the organism in the external world. In the case of the human organism, this is an historical world. The external world faced by the growing ego is at any stage a specific socio-historical organization of reality, affecting the mental structure through specific societal agencies or agents.*

[ibid. p.34 emphasis in the original.]

And on the fate of the rational saps:

*...with the progress of civilization and with the growth of the individual, the memory traces of the unity between freedom and necessity become submerged in the acceptance of the necessity of unfreedom; rational and rationalized, memory itself bows to the reality principle.*

[ibid. pp.33-4.]

9. The 'reality principle' defines a contingently bounded region of 'sets' of possibilities between which are constructed spatial relations, hence a 'topology'.

codes and the rules of 'normal' behaviour, a reality principle, that governing value system that imposes delayed satisfaction, restraint of pleasure, toil (work), productiveness and security<sup>7</sup> which we adhere to with or without engaging a conscious (rational) process of making decisions. Increasing the formality of rituals and rules narrows the range of responses that may legitimately constitute the communicative process and increases the propriety of employing a practical rationality.<sup>8</sup> Rituals and rules are symbolically mediated. For example, by the presence of an ash tray or the absence of a door lock certain acts are suggested or even definitively legislated for or against: we may choose to smoke - to be, perhaps unwittingly, antisocial - we may choose to breakdown a door and enter a private place - to engage in a premeditated criminal activity. In either case the signs we choose to follow or to ignore are clear enough to we who are party to the culture and to its material presences and absences.

The topology here is one of opportunity and constraint, of the actors' freedom to act, to communicate, to exchange information, patterned energy, with other actors.<sup>9</sup> In a communicative environment, therefore, one can imagine the in(di)visible conductors and resistors, capacitors and discharge points, transformers and rheostats, that create the complex forcefields that comprise the aura of a given system: in nature, the aura that is 'life' itself.

In the social sphere the range of communicative acts, from the most immediate to the most complexly mediated, describe the topological possibilities of social construction. Touch, gesture, tool and symbolic object, speech and writing and their intermediate (hybrid) forms comprise the semiotic panoply that internally differentiates social space, and their speed, force, and rapidity imbue any social system with peculiar dynamic characteristics.

10. Virilio has related this notion of speed to the quality of information flow in unaided and aided visual perception:

*...as with all movement, each displacement (human, ocular, optic, opto-electronic) engages a specific speed, and this speed affects the representation under consideration and provokes a kind of rupture or severance which, while it may not be dimensional in the strict, archaic sense of the word, certainly has an impact on the resultant scientific observation.* VIRILIO, Paul. [1984] *Lost Dimension*. Trans. Daniel Moshenberg. New York: Semiotext(e), 1991. p.54.

11. I am deliberately using the term 'force' in a pseudo-physical sense. I do not mean to connote the associated political and anti-political terms 'power' and 'violence' which Hannah Arendt has so eloquently explicated. The idea that comes closest in Arendt's writing it is that of 'rhetoric':

*...speech as a means of persuasion rather than the specifically human way of answering, talking back and measuring up to whatever happened or was done.*

[ARENDT, Hannah. *The Human Condition*. University of Chicago Press, 1958. p.26.]

What I mean is a quality of persuasiveness to a greater or lesser extent suffusing all forms of communicative action.

12. GEERTZ, Clifford. *The Interpretation of Cultures*. New York: Basic Books, 1973. p.145.

'Speed' implies the duration and therefore the complexity of any communicative act in terms of its differentiated content - if you will, the amount of 'ground' covered during the 'contact', the quantity of information exchanged in the transaction.<sup>10</sup>

'Force' implies the intensity and 'mass' of any communicative act in terms of its directionality and potency, its influence on subsequent, concurrent or contiguous interactions.<sup>11</sup>

'Rapidity' implies the relative spacing of a number of communicative acts in terms of a cumulative effect, the construction of an 'event'.

In any visualization of a differentiated social space, therefore, its dimensions should represent (re-present) a variety of topological possibilities, a variety of relational patterns and qualities that produce a particular system, and should make visible its transformations.

## Social Cosmology:

### Hofstede, Bourdieu, Lefebvre, Freud and Jung

Parson's three levels of analysis in social science - culture system, social system and personality system - suggest not merely a differentiated social space but rather a kind of limited cosmology.

*Each of the three must be considered to be an independent focus of the organization of the elements of the action system in the sense that no one of them is theoretically reducible to terms of one or a combination of the other two. Each is indispensable to the other two in the sense that without personalities and culture there would be no social system and so on around the roster of logical possibilities.*<sup>12</sup>

In structure this is not dissimilar to Popper's three worlds.

13. POPPER, K R. *Objective Knowledge: An Evolutionary Approach*. rev. edn. Oxford: Clarendon Press, 1979. p.154. quoted in WERLEN, Benno. [1988] *Society, Action and Space: An Alternative Human Geography*. Trans. Gayna WALLS. Routledge, 1993. p.27.

14. Popper would have had serious reservations about this particular parallel:

*...all social phenomena, and especially the functioning of social institutions, should be understood as resulting from the decisions etc. of human individuals ...we should never be satisfied by explanations in terms of so-called "collectives".*

I include it simply to signify that amongst social phenomena there are those that are neither subjective nor just ideas (shared or otherwise). [POPPER, K R. *The Open Society and its Enemies*, Vol. II. Routledge & Kegan Paul, 1962. p.98 quoted in BHASKAR, Roy. *Reclaiming Reality*. Verso, 1989. p.70.]

15. This is a closer parallel: *World 3, then, is the world of ideas, art, science, language, ethics, institutions - the whole cultural heritage, in short...*

[MAGEE, Bryan. *Popper*. Fontana, 1973. p.61.]

16. HOFSTEDE, Geert. *Cultures and Organizations: Intercultural Cooperation and its Importance for Survival; Software of the Mind*. McGraw-Hill, 1991.

17. BOURDIEU, Pierre. [1979] *Distinction: A Social Critique of the Judgement of Taste*. Trans. Richard Nice. Routledge & Kegan Paul, 1984.

*The first [World 1] is the physical world or the world of physical states [and objects]; the second [World 2] is the mental world of the world of mental states [world of states of consciousness, dispositions to act]; and the third (World 3) is the world of intel - ligibles, or of ideas in the objective sense, it is the world of possible objects of thought: the world of theories in themselves, and their logical relations; of arguments in themselves; and of problem situations in themselves.*<sup>13</sup>

World 1, the objective world of physical reality, parallels the social system, the system of roles and positions;<sup>14</sup> World 2, the subjective world of minds, parallels the personality system of individual actors; and World 3, the objective world of independent constructs, parallels the culture system, the system of values and beliefs.<sup>15</sup> The parallels are not 'close' in the sense of constructing or occupying wholly commensurate dimensions, however, in each 'cosmology' the pattern of dimensionally discreet conjunctions is similar in one sense, that of generating productive tensions between realms of description or construction and, therefore, of realizing the potential in each pairing for embedding and zeroing (enfolding) one space within the other.

To elucidate this potential, I will draw on works which approach the problem of social space with purposes that broadly reflect the cultural (Hofstede), the social /structural (Bourdieu and Lefebvre), and the personal (Freud and Jung).

In *Cultures and Organizations* Hofstede relates dimensions of cultural difference, defined through the interpretation of a mass of empirical data, to social structure in organizations.<sup>16</sup>

In *Distinction* Bourdieu describes a range of 'dependent' and 'independent' social variables that may be used to generate various social systems of roles, positions and relations.<sup>17</sup>

Lefebvre, in *The Production of Space*, shows that in the attempt to reduce to a common measure (that of money) a wealth of social phenomena in the modern industrial world, those phenomena cannot “speak the truth about themselves”. But they may still ‘speak’ in a limited ‘dissimulating’ language of :

*the amount of social labour they contain, not only the productive labour they embody, but also the social relationships of the exploitation and domination on which they are founded.*<sup>18</sup>

Freud redifferentiates concepts of the conscious and the unconscious. In the unconscious, the aspect largely ignored in other theoretical expositions, he describes a space of the instinctual, emotional, and sexual drives that underpin our behaviours. In this view, dimensions relating the personal to the social are given depth. They escape the bounds of the rational - the (self)conscious - and take on new degrees of freedom in the non-rational and irrational - the (collective) unconscious - and in their emergent possibility - the preconscious.<sup>19</sup>

Jung animates the depth that Freudian ideas add to social space by reference to libido - natural psychic energy - which flows back and forth between the inner and the outer, the personal and the social.<sup>20</sup>

These approaches do not exhibit common aims and are pursued within rather different methodological traditions. However, their contrasts rather than invalidating their conjunction provide exactly the kind of productive tensions that I wish to project as constitutive of social space: I focus on them not for the consistency of their respective internal logics but rather for the generative potential of playing their contents off against each other. This initial procedure owes more to poetics and rhetoric, than to analysis and rationale - a choice justified by the

18. LEFEBVRE, Henri. (1974] *The Production of Space*. Trans. Donald Nicholson-Smith. Basil Blackwell, 1991. pp.80-1.

19. BOCOCK, Robert. *Sigmund Freud*. Ellis Horwood, 1983.

20. JUNG, C G. *Psychological Types*. Trans. H Godwin Baynes. Kegan Paul, Trench, Trubner, 1926. pp.571-2.

essentially creative, ‘designerly’ nature of this modelling project which requires the appropriation of rich source materials in advance of their reconfiguration and rationalization: rather, as when constructing a map, one first travels and documents the mass of heterogeneous features constituting a landscape before attempting to find an order in them. Lefebvre also points to the open-ended nature of the problem of modelling social space, and this may also be cited as a weak rationale for the ‘designerly’ approach. Ultimately, social reality is “dual, multiple, plural” and the dimensions, of which its various visualizations may be constructed, imply some

*...terribly concrete abstractions ... (money, commodities, material exchange) as well as 'pure' forms: exchange, language, signs, equivalences, reciprocities, contracts, and so on.*<sup>21</sup>

What any dimensionally simple subspace gains in clarity it necessarily loses in its exclusivity and its dissembling language. “Any determinate and hence demarcated space necessarily embraces some things and excludes others...”<sup>22</sup> However, in as much as all language relies upon difference and metaphor in the generation of meaningful exchanges, the problem of subspace dimensionality versus clarity of visualization is relative in any case. There is no teleology of social spatiality, no comprehensive multidimensional space in which the ‘truth’ about social phenomena may actually be spoken. The relationship between space and language is a question that Lefebvre addresses as a straightforward ‘communicative’ issue: what space does is what it says.

Between the moves of Hofstede, Bourdieu, Lefebvre, Freud and Jung what one may discern, therefore, is the necessity of choosing ground within which to operate, of constructing spaces which, in their constitutive dimensionality, bring visible things into being and tend to make them

21. LEFEBVRE, [1974] p.81.

22. *ibid* p.99.

‘absolute’. This crystallization of phenomena depends upon a setting up of systems of relations that are enclosed, even if by ‘soft’ boundaries, and energized by the dynamics they may display in a particular ‘language’ of visualization/description. However, as Lefebvre observes:

*...the Thing ...never quite becomes absolute, never quite emancipates itself from activity, from use, from need, from ‘social being’.*<sup>23</sup>

And it is in this deferred presence, therefore, that one retains the scope for interpretation and avoids an ultimately nihilistic reductionism. Any object (Lefebvre cites the peasant dwelling as an example) remains “...intermediate between work and product, between nature and labour, between the realm of symbols and the realm of signs”.<sup>24</sup> And it engenders a space which is both “natural and cultural”, both “immediate and mediated”, both “given and artificial”. ‘Mapping’, as a particular inscription and encryption of spatial events (places), is thus reinforced as the most potent metaphor for the process of modelling.

### Mapping Social Space

The crucial question is: what ground is it best to choose to make visible an adequate social mapping of a particular programme of events? The dimensions enumerated and qualified by Hofstede, Bourdieu, Lefebvre, Freud and Jung offer a bewildering range of possibilities. (1) Hofstede's ‘ethnographic’ cultural dimensions, which are used to place sets of values and beliefs, include: power distance - a measure of dependence relationships; individualism-collectivism - a measure of the importance of personal and group identity; masculinity-femininity - a measure of the

23. *ibid.* p.83.

24. *ibid.*

distinctness of gender roles; and uncertainty avoidance - a measure of the tolerance of ambiguity. (2) Bourdieu's 'Marxist' economic and social dimensions which are used to place practices and preferences include such dependent variables as 'political opinion' and so called independent variables such as sex, age, religion, educational level, income, and occupation. (3) Lefebvre's 'post-Marxist' analysis proposes we make visible "encounter, assembly, simultaneity"<sup>25</sup> via the abstractions of exchange, language, signs, equivalences, reciprocities, contracts, etc. though without any clear indication of what such visualizations might look like. (4) Freud immediately transforms the dimensions of any Marxist/structuralist model or ethnographic/interpretive model by layering into it non-rational/irrational aspects which tend to radically reconstruct patterns of relations. Dimensions of gender/sexuality, power relations, ideology/religion, and language each become two-dimensional spaces stretching beyond the conscious into the realms of the preconscious and the unconscious. And (5) Jung's animation of these subspaces is achieved by constructing polarities between which libido flows. These 'opposites' include: unconscious-conscious; introversion-extraversion; feeling-thinking; intuition-sensation; individual-collective; instinct-will; introjection-projection and; abstract-concrete. In one constellation, Jung generates a two-dimensional field of basic psychological functions (Figure 2.2.1) which transforms any given social dimension into a three-dimensional space.

The scheme that Hofstede develops has a breadth to it that is remarkable. It touches on emotional, political, behavioural, perceptual and cognitive aspects of the place of the person in social terms. However, it privileges the larger collective (for 'Person' read 'national type') over other sizes

25. *ibid.* p.101.

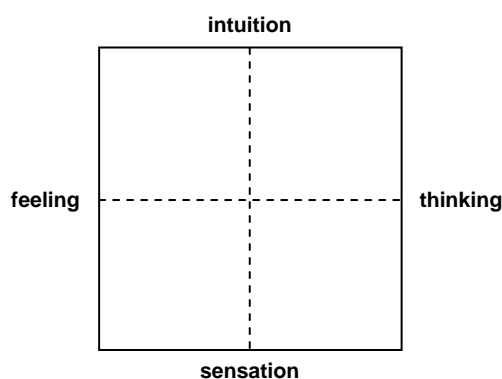


Figure 2.2.1

---

Jung's four basic psychological functions defined by the intersection of two pairs of opposites: feeling-thinking and intuition-sensation.<sup>26</sup>

---

26. On the basis of "many years experience" rather than any a priori reason, Jung distinguished four basic functions: *two rational and two irrational - viz. thinking and feeling, sensation and intuition.*

[JUNG, 1926, p.547.]

*...we use [these functions] to orientate ourselves in the world (and also to our own inner world): sensation, ...is perception through our senses; thinking, ...gives meaning and understanding; feeling...weighs and values; and intuition ... tells us of future possibilities and gives us information of the atmosphere which surrounds all experience.* FORDHAM, Frieda. *An Introduction to Jung's Psychology.* Penguin, 1953. p.35.]

and types of collective. I am aware, for instance, that the idea of 'virtual community' is of increasing importance not only in the international (transnational) working environment and in the academic world but in popular leisure. This is the result of a coming together of laser disk, personal computer, and telecommunications technologies to make generally available real-time access to the internet. Hofstede's scheme also marginalizes the material aspects of social relations, which, although they may not be as central as they were once thought to be, still have a pressing relevance. Even the 'wired up' wiz kid has a 'real' body that may be subjected to control and positioned by the power relations, both economic and ideological, that fix the conditions for physical survival. For the poor man or woman of the 'developing' world the immediate prospect is an all too 'real' environment of deprivation maintained by material as much as cultural relations.

In contrast, outright acceptance of the scheme of Bourdieu would privilege description of material relations as expressed in Marxist analyses. This is not easy to accept, given the notions of non-hierarchical social organization that have been invoked in the critique of modern industrialization and in the investigation of 'alternative'



27. The following represents a tiny selection of the literature of the period:

CALDER, Nigel. *Technopolis: Social control of the uses of science*. MacGibbon & Bee, 1969.

COUNCIL on ENVIRONMENTAL QUALITY and the DEPARTMENT of STATE, *The Global 2000 Report to the President: Entering the Twenty-First Century*. Allen Lane, 1982.

ECOLOGIST, The. *A Blueprint for Survival*. Revised edn. Penguin, 1972.

MEADOWS, Donella H. et al. *The Limits to Growth*. New York- Universe Books, 1972.

28. LASH, Scott. & John URRY. *Economies of Signs & Space*. Sage, 1994. pp.111-44.

29. For example this was thoroughly reflected at the 1993 International Design Congress in Glasgow. A whole section was devoted to 'the ethical dilemma': Victor PAPANEEK who developed the original green design manifesto *Design for the Real World* between 1963 and 1972 spoke on "The coming of a new aesthetic: eco-logic, etho-logic, bio-logic" and Ezio MANZINI reinforced the necessary connection between "Design, environment and social quality". Significant contributions to other sections included: John WORTHINGTON "Balancing public conscience and private initiatives"; Katherine McCOY "Countering the tradition of the apolitical designer"; Bill MOGGRIDGE "Paradoxes of the future" and; Derrick de KERCKHOVE "Design, interactivity and the production of meaning". MYERSON, Jeremy. *Design Renaissance* Selected papers from the International Design Congress, Glasgow, 1993. Open Eye/CSD, 1994.

and 'appropriate' technologies. In the 1960s and 1970s the Marxist analysis of capitalist production, which had established the links between the process of fragmenting and hierarchically structuring labour to facilitate mass production and massive economic development, technological innovation, and social control, was turned on its head. It achieved this largely through consideration of: the damage done to the physical and social environment; the (non)sustainability of economic growth; the decline in traditional moral values such as cooperation and mutual respect; and the disintegration of community life and the attendant problems of alienation, disempowerment, and the commodification of relations.<sup>27</sup>

Whilst such analyses have had considerable impact on political thought, particularly in the socialist and liberal movements, and in the recent flowering of neo romantic, neo-anarchistic tendencies as exemplified in the Green movement, their impact on industry and the institutions has been limited. In the UK those directly involved in or supporting manufacturing industry have generally made only superficial gestures in the direction of decentralized organization and worker participation in development. Two areas where greater signs of a radical shift in principles can be seen are in the 'software' sectors of the information technology and culture industries. In both, most companies are relatively small and significant attempts have been made to integrate the autonomous creative individual into a network of productive and decision-making relations, and the 'flat' organization has become the norm.<sup>28</sup> Models for this have included 'community', 'college', 'family', and 'collective'.

There is an increasing demand for design to embrace a new, ethical, cooperative, eco-conscious position in the post-industrial setting.<sup>29</sup> This, similarly, can be traced back to an

origin in the 60s and 70s critique of industrialism. This is no neo-romantic backlash but rather a pragmatic response to perceived changes in the global industrial complex and the impact this is having on questions of economic survival and cultural identity. It has been spurred on, more recently, by: (1) an invasion of what were formerly, securely solid and actual realms in the built environment by the electronic media and their (new) virtual spaces;<sup>30</sup> and (2) the demand for a more flexible, responsive, reliable and accountable design process, one that draws on the end user's experience, knowledge and skill in the sense of admitting a far broader and more finely tuned understanding of human factors and in the sense of entailing forms of participation throughout the product cycle.<sup>31</sup>

Lefebvre's scheme seems underdeveloped for the current purposes and to be in need of a certain 'concretization'. However, it does have a promising quality: that of openness. The idea of 'exchange', for example: "...does not determine what is exchanged: it merely stipulates that something, which has a use, is also an object of exchange".<sup>32</sup> This openness enables Lefebvre to include material and non-material possibilities in his idea of 'exchange' and also in those of communication, encounter, assembly and simultaneity, and to contrast definitively natural space and social space. The former "...juxtaposes - and thus disperses." The latter "...implies actual or potential assembly at a single point, or around that point." This perhaps suggests that whichever dimensions are proper to the visualization of social (sub)spaces, they should at least operate/read as continua of values rather than as ratios of quanta.

30. MATTHEWS, Geoff.

"Invasion of the Body Snatchers: Architecture and Virtual Space", *Culture Theory Criticism Occasional Papers*, University of Humberside, 1994.

31. MITCHELL, C Thomas. *Redefining Designing: From Form to Experience*. New York: Van Nostrand Reinhold, 1993.

32. LEFEBVRE, [1974] p.101.

In the present context, at least, Freudian and Jungian notions appear to modify the dimensions suggested by others rather than offering any new and independent scheme. However, the modifying properties that they have

are radical ones. They connect the social and the personal spheres by crystallizing the qualities that define individuality and commonality.

### **Social Dimensions**

To characterize the dimensions of social space in one way rather than another is to choose a particular starting point, no more than that. Where one may end up, in mapping the various territories these dimensions reveal, is an open question. Potentially, one may spend a lifetime discovering their possibilities. A designerly approach to the specific problem of the social context of museum•design•organization suggests that between them Hofstede, Bourdieu, Lefebvre, Freud and Jung provide an adequate range of variables from which to select or distil dimensions describing appropriate subspaces.

At first glance, Hofstede's cultural dimensions seem to offer a very useful perspective. However, it is important to note that the context in which these dimensions were constructed was immediately global and concerned with an overtly commercial rather than cultural object. The IBM corporation and the UK museum design community do not necessarily reflect the same cultural dimensions and, even if they do, they are unlikely to exhibit the same range of differences within each one. I will consider each dimension in turn with these provisos in mind.

- 'Power distance' potentially provides a scale along which to position the dependence relations of different groups/individuals in a museum project and to compare variations in dependence relations for a particular group/individual as they participate in projects in different museums. Where, through sheer weight of statistical evidence, Hofstede was able to characterize

the dependence relations typical of different national cultures using this dimension, this is neither possible in the museum•design•organization context nor is it what is required. Rather a ‘placing’ of individuals or of more or less coherent groups is suggested. I believe the notion of ‘power distance’ remains perfectly valid, however, the cultural context in which it must function is much more local and specific than that of the national. The proposition is that a relative measure of dependence relations between different ‘culturally’ defined groups/individuals in a local context may still tend to reveal characteristics common to those types of group/individual. Given the tendency for the members of each functional group in a museum to achieve broadly the same educational level at each particular stage in the career development characteristic of that museum function, and therefore for there to be a more or less characteristic cultural capital for that group, it does not seem unreasonable to suggest that a qualified use may be made of the dimension of power-distance in a model of museum•design•organization.

- ‘Individualism-collectivism’ potentially represents a measure of the importance of group and individual identity amongst various functional groupings - of both the more coherent professional type and of the more heterogeneous multidisciplinary type - in the context of a museum design project and in the wider museum/museum-related community. Similar arguments pertain here as above for power-distance. Although no definitive research into the issue of individualism-collectivism amongst the various museum functional groups seems to have been undertaken, there is nevertheless some anecdotal evidence from such studies

as those undertaken by Kavanagh that measurable differences do indeed exist.<sup>33</sup> The curatorial group, in pursuing the profession v professionalism debate, is developing a collectivist stance over and above the factional academic allegiances one has noted in the past from exchanges in the *Museums Journal* and at the various Museums Association conferences. The conservatorial group already has a strong collectivist stance developed during thirty years consistent battle to establish specialist credentials in the museum context. One could argue that the adoption of an empirical scientific methodology and discourse has played a significant part in this. In contrast, the design function in museums is marked by inconsistencies in job descriptions and titles, and in organizational position. A culture of individualism, which characterizes most independent design practice, is promoted in art and design education and tends to carry over into the institutional context of the museum in spite of the strong pulls often exerted by multidisciplinary project teams in the direction of collectivism.

- 'Masculinity-femininity' provides a means of identifying more and less distinct gender roles in the wider museum and museum-related community and perhaps of dissecting complex functions performed by particular groups/individuals in a particular museum. However, in some respects the notion of gender role entailed in this conceptualization of a cultural dimension seems out of keeping with the radically decentred position of the subject in postmodernity. One can argue that there is a creative aspect to gender role, a symbolic dimension, which is increasingly explored and exploited by individuals and by social groups in the expression of 'lifestyle' preferences. Examples of this expression include: camp

33. KAVANAGH, Gaynor. "The museums profession and the articulation of professional selfconsciousness". in KAVANAGH, Gaynor. (ed.) *The Museums Profession*. Leicester University Press, 1991.

and macho behaviours, overt celibacy, power-dressing, the 'we' and the 'one', new man, and male feminism. In general, ambivalence to gender role is no longer a problematic attitude and gender role transformations do not necessarily constitute unacceptable behaviour.

*Gender is self-selected. This freedom opens up a wealth of possibilities. ...The imagination of each user creates the context in which all others can act. The more willing each person is to invest his or her imagination in creating objects and descriptions, the richer and more successfully dramaturgical the environment will be.*<sup>34</sup>

Although written about the virtual spaces created by and for the users of multi-user dimensions (MUDs) on the internet, many of the same dynamics and opportunities are available to the creator-users of interactive exhibits and, if we project forward to the fully collaborative design process (project cycle), of whole exhibitions and entire communicative environments. Potentially the temporal separation of participants in the interactive exhibit or in the collaborative design process offers the same opportunity as that for MUD users. They may assign to themselves behavioural and personal attributes that are functional but 'fictional'. Interactive software and radically participative design protocols have in common the purpose of facilitating "the sharing of imagined realities".<sup>35</sup> The difference between them is that only design is looking to such imagined realities as proposals for change in the creator-users' actualities. What we are already witnessing is that the more these actualities are shaped by the presence of virtual spaces the less the traditional rules governing gender roles matter and the more they are reformulated as one of the creative variables of 'lifestyle' and 'workstyle'.

34. REID, Elizabeth. "Virtual Worlds: Culture and Imagination". in JONES, Steven G. (Ed.) *CyberSociety: Computer-Mediated Communication and Community*. Sage Publications, 1995. pp.181 & 183.

35. *ibid.*

- The ‘uncertainty avoidance’ dimension potentially provides a measure of the individual/group's tolerance of ambiguity and its ability to cope with uncertainty and necessary risk. Those that tolerate ambiguity, cope with uncertainty and take risks successfully acquire status in some roles (designer or manager) whilst in others become identified as unreliable (security guard or conservator). This duplicity can be an important factor in the breakdown of relations between creative and technical members of a project team especially in the more traditional collection-based/-oriented museum.

Several of the ‘independent’ variables used by Bourdieu may be useful. For example, given the scope of designers’ practical interests, which range from the technical to the stylistic, from the economic to the aesthetic, from the formal and communicative to the symbolic and ‘semantic’, the potential of conjoining economic and cultural dimensions to open up social spaces tuned to the design context would appear to be high.

- ‘Income’ and ‘educational level’, which refer to levels of acquired economic and cultural capital respectively, are dimensions of this sort.
- ‘Sex’, as a variable has already been updated and contextualized in Hofstede’s cultural view of ‘gender roles’. However, the latter could be opened up further by consideration of alternative gender constructions - those found, for example, in the various MUDs (Multi-User Dimensions) on the internet. Taking the broader view five gender assignments are possible: male, female, plural, neuter, and hermaphrodite.<sup>36</sup>
- ‘Age’ interrelates in complex ways both with ‘educational level’ and with ‘income’ and is potentially useful even if as a ‘secondary’ variable. It also interrelates with

36. *ibid.*

‘occupation’ or, given the limited context of museum• design•organization with what is perhaps better thought of as ‘functional role’.

The problematic terminology of Lefebvre's ‘pure’ abstractions - exchange, language, signs, equivalences, etc. - points to the need for a contextualizing interpretation. Lefebvre, it may be argued, intends no such latitude. However, I take the criticism he levels at some theorists, that recourse to such concepts as rupture, *coupure*, or break is no substitute for an account of the move in discourse from one kind of spatiality to another, to mean that some ‘accommodation’, at very least, is effectively entailed by any project that models particular possibilities in radically open (dual, multiple, plural) social space.

Of the terms Lefebvre mentions by name I start with the following fairly ‘concrete’ interpretations:

- ‘Exchange’ I take to imply material exchange between participants in the museum design process as a measure of level of involvement – ‘involvement’ here is meant in its most practical sense of implicated in and concerned with a significant range of the complexity of the museum design context.
- ‘Language’ I interpret as meaning a measure of the commonality or difference in what Rorty terms ‘final vocabulary’ between the various individuals involved in a particular museum design project or within specific heterogeneous functional groupings in the wider museum design context.<sup>37</sup>
- ‘Signs’ I interpret as referring to the level of meaningful products associated with individual roles or with specific functional groups and, therefore, as a measure of documentary visibility. Meaningful products, in the

37. *All human beings carry about a set of words which they employ to justify their actions, their beliefs, and their lives. ...I shall call these words a person's "final vocabulary"*.

[RORTY, Richard. *Contingency, Irony, and Solidarity*. Cambridge University Press, 1989. p.73.]



museum design context, include all recorded forms of communication (written, drawn, taped, digitized, etc.) and the designed end products that carry the mark of their originators' identities (the material culture of museum design: buildings, exhibitions, publications, education programmes, collection management systems, etc.)

- 'Equivalencies' and 'reciprocities', I take to refer to the qualities of specific functional roles. I interpret them as a measure of complementarity of function - functions of low complementarity have a high degree of equivalence and a low degree of reciprocity and individuals or groupings encompassing such functions tend to experience duplications of effort, direct conflicts of interest, underemployment, internal redundancy, devaluation of the individual, etc.
- 'Contracts' I interpret as referring to the structure of working relationships and to be a measure of their formality or informality. Formal contracts tend to be highly structured, rule bound, rigid and carry predetermined levels of reward for compliance and penalties for non-compliance. Informal contracts, on the other hand, tend to be loosely structured, built on trust, flexible and represent opportunities for reward and risks of penalty whose levels are initially indeterminate.

Freud introduces a thickening agent to any discourse of social spatiality in the form of a reflection: everything that is in consciousness is merely the visible tip of the social iceberg. The surface self, the ego, covers over the depth of the whole self. We are cultural beings and the superego is most clearly a cultural construct. The ideal self we project for ourselves is at once a celebration of the perfect embodiment of a system of values and beliefs, and the means by

which we mask our faults and our imperfect lives: we are often irrational, driven by our desires, obsessions, sexuality, guilt, fears and hate.

- 'Sexuality', as interpreted in Freudian analysis, connects with 'Sex' in Bourdieu's scheme and with 'Masculinity-Femininity' in that of Hofstede. However, it goes beyond the biologic given and the conscious play of self-image. One is reminded that:

*Sexual action is action which gives erotic pleasure ...Sexual objects ...may be either a man or a woman for either gender ...sexual objects may be chosen of any age ...Some people may even choose animals ...pet dogs, cats, horses, fish, or birds. Sexual aims vary from stroking, kissing, looking at or being seen by the sexual object, to genital intercourse, anal inter-course, and sadistic or masochistic practices.*<sup>38</sup>

Freud delves beneath overt social display, to reveal unconscious drives that affect the character of the productive/communicative activities and roles we construct through our social relations - i.e. the creative, the manipulative, the controlling, the caring, etc.

38. BOCOOCK, 1983, p.38.

39. Freud's hypothesis is that in the distant past the human animal at some point experienced some resistance in the human and natural environment to his/her achievement of immediate satisfaction. He/she, therefore, learned to

*give up, momentary, uncertain, and destructive pleasure for delayed, restrained but 'assured' pleasure.*

(MARCUSE, Herbert. *Eros and Civilisation*. Routledge & Kegan Paul, 1956. p.13.)

The reality principle having struck, the human being represses desire and anger to allow reason to surface and action to be directed towards moderated future goals.

- 'Imagination-Reason' connects with Hofstede's notion of 'uncertainty avoidance'. The two basic mental processes split in the transition from human-animal to human-being, from a condition determined by the 'pleasure principle' to one determined by the 'reality principle'.<sup>39</sup> The alternate exercise of imagination and reason produces the greater ability to tolerate ambiguity and cope with uncertainty and necessary risk. Confusing or inadequate information when addressed by reason alone, which is limited to 'reality testing', tends to produce inappropriate responses or lead to a catastrophic switch to extreme irrational behaviour. Equally, when addressed by the imagination alone which is limited to uninhibited surfacing of preconscious images and ideas,

tends to produce 'generic' and therefore inadequately focussed responses or lead to a catastrophic switch to excessively rational, rigid and mechanistic behaviour.

- 'Language' connects with the same term in Lefebvre's scheme. Lefebvre identifies language with two contradictory views – 'a pure formalism' and 'a power of abstraction'. These neither stand alone nor hang together. In the former view "the forbidden fruit of lived experience flees or disappears under the assault of reductionism".<sup>40</sup> And in the latter the logics of metaphor and metonymy rule and "a terrible power of negativity"<sup>41</sup> is admitted: the mesmerizing difference between signified and sign creates the power to destroy and to create "a new world different from nature's initial one".<sup>42</sup> Freud's centralizing of 'marginal' aspects of language opens up the rational and conscious views of language and social relations to the irrational and unconscious aspects that hold them in productive tension in an interpretive space. Applying the interpretive notions of dream analysis to the analysis of

*slips of the tongue and of the pen (Freudian slips); bungled actions ... (parapraxes); forgetting words and names; ...misreading words [and] ...wit, jokes and plays on words*<sup>43</sup>

concerned itself with revealing the unconscious. But:

*It is clear now [that] ...these early texts ...are concerned with language and meaning. Even in dream interpretation, the picture of the dream must first be put into a verbal form before the interpretation can begin.*<sup>44</sup>

Freud thus provides depth to the communicative process that Rorty, Habermas and others have invoked as central to cultural and political action in general and (I extrapolate) to design in particular.

40. LEFEBVRE, [1974] p.134.

41. *ibid.* Attributed to Hegel.

42. *ibid.* p.135.

43. BOCOCK, 1983, p.34-5.

44. *ibid.* p.35.

On the question of the 'ideology/religion' dimension Freud argues carefully for the conjunction or equivalence between ideology and religion. I would not take issue with the argument that this dimension is relevant to the development of the individual, that it is represented as collective belief and therefore that it is manifest in the social realm. However, for reasons that will become apparent, I wish to exempt ideology from the visualization of social space. Although there is a sense in which all of the 'depth' that Freudian ideas add to prospective social dimensions is of an embedded or enfolded nature, that is to say, in social terms it is below the surface and 'distanced' - to some extent taken out of time and operating by 'distance effects' - ideology is perhaps the one dimension which most clearly departs from the simple notion of social dimensionality. I will argue that it is better conceived as an independent space of quite distinctive character - a paradigmatic space which is metasocial as much as metaphysical and, for that matter, metacritical.

Jung develops a wide range of what he terms 'opposites' and these may be construed as potential dimensions or modifiers of dimensions in social space. Crucial to understanding the Jungian scheme are the concepts 'libido', 'progression' and 'regression'. Libido is general psychic energy. It does not imply a 'force' as such, "it is simply a convenient way of describing ...observed phenomena".<sup>45</sup> Progression and regression are complementary concepts relating to the flow of libido. 'Progression' is the forward movement "which satisfies the demands of the conscious" and "is concerned with the active adaptation to one's environment".<sup>46</sup> 'Regression' is the backward movement which satisfies "the demands of the unconscious" and is concerned with "adaptation to one's inner needs".<sup>47</sup> For Jung an important aspect of libido is that it may flow to an

45. FORDHAM, 1953, p.17.

46. *ibid.* p.18.

47. *ibid.*

48. This is taken from a 1993 *The Late Show* broadcast. It immediately followed the series *Culture Clash* (BBC 2, 1993) which investigated the persistence of the 'two cultures' debate initiated by C P Snow in the 1959 Rede Lecture at the University of Cambridge. *The Late Show* participants were: Professor Lewis Wolpert, biologist; Jonathan Miller, polymath; Mary Midgley, philosopher; and Robert Young, academic and editor of *Science as Culture*.

Lewis Wolpert put an uncompromising reductionist argument about the primacy of Science. Jonathan Miller countered the implication that:

*...there is no difference in kind between the complexities of human affairs and the complexities of bio-chemical affairs and that ultimately the one will reduce to the other...*

by drawing attention to the fact that the reductionist programme:

*...takes so little account of what in fact is distinctive about the complexity of human affairs ...we are not complex merely by virtue of the fact that there are more factors involved which we can't as yet introduce sufficiently sophisticated mathematics to deal with, but ...by virtue of something which doesn't occur in the rest of nature, which is the fact that "there is something it is like to be us"...*

[quote attributed to the philosopher Thomas Nagel.]

extreme and instantaneously pass over into its opposite. The possibility of such a switch of polarity is an important feature of a balanced individual and may be so also of a group or larger collective. The opposites between which libido flows in turns by progression and regression form the central thread of Jung's most important work *Psychological Types*: the following dualities are all developed from the definitions included in that work.

- 'unconscious-conscious', by introducing the opposing concept of the unconscious as what is not conscious, admits a whole realm of hitherto unrevealed possibilities. In design, the play of both rational and irrational processes, in addressing complex practical situations, is a methodological prerequisite. And in museographical practices, certainly since the postmodern deconstruction of traditional curatorship, the play of both analytical and narrative, broadly deconstructive and reconstructive processes, is similarly definitive. The character of these processes can be given much greater clarity by reference to the part the unconscious plays in surfacing cultural, instinctual and personal material in the (re)creative process: In Jonathan Miller's words: "there is something that it is like to be" of which science - analytical, conscious thought in general - can tell us little.<sup>48</sup> However, in poetry (*poiesis*) one is 'in touch' with the collective unconscious, the emotional and experiential inheritance, and has the chance, if one is finely tuned, to produce something, because of its powerfully deep resonances, of lasting value.
- 'introversion-extraversion' focusses on the directionality of libido as the determining characteristic. Introversion is broadly associated with regression and extraversion with progression. These movements may be related to

the phases of complex functions in the museum context.

The predominantly regressive movement of introversion is 'dis-played' in the subjective interest towards the subject in, for example, the designer's focus on personal satisfaction and with aesthetic integrity in the process of designing when it is experienced primarily as welling up out of the self, or the parallel focus of the curator as a narrative scheme develops from conceptual outline to 'final' text. In each case, what matters to the subject is the satisfaction of psychic needs through an essentially erotic (rather than sexual) dynamic, that is, one characterized as primarily emotional rather than sensual.

The predominantly progressive movement of extraversion, on the other hand, is 'dis-closed' in the subjective investment in the object. For example, the designer's focus on the object of design or the curator's on the object of a museum project entails a shaping of events as well as a shaping of the material content of a practical situation. All of which aims at a conscious identification with the world, an involvement that seeks not merely accommodation but union. Here the dynamic projects beyond fantasy into a physical consummation, beyond emotion into the sensual.

- 'feeling-thinking' and 'intuition-sensation', as the rational and irrational dualities, construct the subspace of psychological functions. This has potential as a way of visualizing the dynamics of certain behaviours in the museum design process. The 'moments' in a creative or decision-making process can be associated with movement between psychological functions. This could be as an adjunct or possibly an alternative to the characterization of such moments in terms of the psychological types, i.e. introverted and extraverted. The movement from sensation to thinking for example

describes a rational thought process informed by direct sense experience: the reverse movement of a directed physical action informed by prior 'abstract' thought.

- The description of the dualities as straightforwardly 'rational' and 'irrational' is a simplification which, in considering the combination, Jung qualifies on several counts. For example, although feeling is the psychological function that 'weighs and values' and is therefore, in that sense, 'rational', undirected passive feeling, which Jung calls 'feeling-intuition', is, he says, definitely irrational.<sup>49</sup> I interpret the space of psychological functions as being divided by the feeling-thinking axis with the 'passive' intuition-dominated regions being irrational in character and the more strongly so the further one moves away from the axis. The other regions have sensation at their base and are more strongly rational in character as one moves away from this base towards the axis (Figure 2.2.2.)

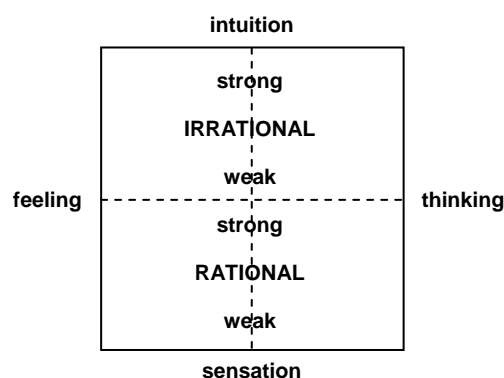


Figure 2.2. 2

The 'rational' duality *feeling-thinking* and the 'irrational' duality *intuition-sensation* construct a sub-space of psychological functions in which the irrational quality dominates the feeling-intuition and thinking-intuition regions and the rational dominates the feeling-sensation and the thinking-sensation regions.

- 'individual-collective' links with the similarly named dimension in Hofstede's scheme. The psychological

49. JUNG, 1926, p.546

individual only comes into being in consciousness and then it is the complex formations of psychic elements peculiar to the individual, and not the elements themselves, which are common to many, that characterize individuality. The collective has both conscious and unconscious contents. In Hofstede's cultural scheme the individual-collective dimension is employed as a measure of personal and group identity: Jung's psychological scheme offers another twist to this by suggesting that, unless set off against the unconscious-conscious dimension, it is immediately ambiguous.<sup>50</sup> Although individual unconscious as a region has no real 'place', in that, before conscious development of a self, identification entirely with the object represents an immature condition one would not expect to find 'involved' in a social context, collective unconscious plays as significant a role as does the collective conscious. Hofstede's category of the collective is really only a measure of conscious group identification: the unconscious remains hidden or, more properly, 'unrecovered' (Figure 2.2.3.)

50. It should be noted also that existential thinking has a problem with these notions of the 'individual' and the 'collective'. They may seem to imply a bridgeable dichotomy. If 'collectivism' is taken to imply the collection of separate individuals then it "really misses the meaning of community" that is intended. And although there is an essentially lonely aspect to individual existence, there is no real alone-ness. The self is not "pre-existent and self-sufficient" but emerges from and is always with a world of others. For this reason an alternative psycho-social formulation would be 'privacy-community'.  
[MACQUARRIE, John. *Existentialism*. New York: World Publishing, 1972. pp.75-7.]

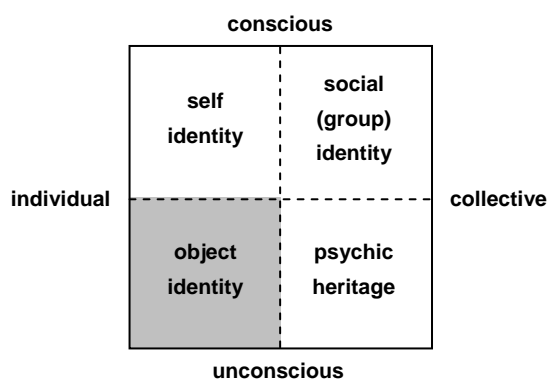


Figure 2.2. 3

The Jungian individual-collective and unconscious-conscious dimensions construct a sub-space in which the region of the 'collective unconscious' is made visible. In Hofstede's cultural scheme the collective aspect only constructs a space for conscious group identity (See this section, above).



In the museum design context the collective unconscious clearly plays an important part in the construction of narrative. The playing out of the creative and administrative groups' mythic relations and the deep structures of the products of the planning and design processes both draw on an archaic psychic heritage which is 'cultural' in a far broader sense than is the conscious contents intentionally projected by specific individuals and groups in the 'limited' local context of the museum organization.

- The 'instinct-will' dimension embraces forms of psychic energy: 'instinct' that of the unconscious, what we experience as primitive impulses, and 'will' that of the conscious, what we develop as conscious motivations which "owe [their] ...existence to culture and moral education".<sup>51</sup>

In museum design the role of conscious motivations is a very large one: the broader aspects derive from the importance of material culture as a vehicle for projecting values and beliefs. The continuum of material culture is broken only by the will of differentiated individuals and groups. The more 'conservative' element attempts to preserve or to re-embody values consistent with an actual (or imagined) past state of things whereas the more 'innovative' element attempts to establish or to transfer values that reflect the actual (or desired) present condition in the light of current interests and concerns. Neither element can be exclusively identified with the designer or with the curator, but, in the context of the particular museum community, one has the opportunity to place successful individuals and groups according to the wilfulness of their activities.

I suggest that there is a tendency for the experienced and more coherent group to 'automate' its conscious motivations, to adopt familiar patterns of collective will,

51. *ibid.* p.617.

to become unquestioning: this process should not be confused with a coincidence of instinctual motivations. The group dynamic that is hard-won by a collective conscious effort and a bringing together of the will is thereafter vulnerable to a decadent complacency, a decline into unthinking routine, a progressive collective blindness to changing circumstance, and ultimately to a potentially catastrophic dysfunctionality. On the other hand, I suggest that the happy accident of coincident instincts in a group tends to engender a collective creativity, an openness to the changing world and growth into coherent conscious motivations. Of course, the former dynamic may trigger a radical switch into the latter and the latter dynamic may be carried over into the former: in this sense the ‘dynamic’ that heads towards automated motivations and potential catastrophe is the social expression of a ‘collective regression’ and that which heads towards group creativity and ‘growth’ is one of ‘collective progression’.

- ‘introjection-projection’, the complementary flows of psychic contents between subject and object, relates closely to introversion-extraversion.

*Introjection is an extraverting process, since for this adjustment to the object a feeling into, or possession of, the object is necessary.*<sup>52</sup>

The object is assimilated by the self and an identity with the object is formed. Projection, however, is an introverting process. It animates and separates the object through the transfer to it of psychic contents.

This dimension has the potential to illuminate those moments in the museum design process when identification with the object of design changes. A prerequisite for successful evaluation of a design is the ability to

52. *ibid.* p.567.

‘step back’ from one’s immersion in the work and to take a broader conscious view of what has been going on and what state of things has been reached. This movement from an introjecting to a projecting flow of conscious and unconscious contents is the achievement of the individual, in terms of psychological functions, in gravitating towards the feeling-thinking axis: as one leaves the realm of pure sensation the rational quality becomes stronger and as one leaves that of the intuitions the irrational quality becomes weaker.

- ‘abstract-concrete’ relates to the individual treatment of the meaning or general character of psychological contents. ‘Abstraction’ literally means ‘differentiating out’ or ‘separating from’. Abstract thinking draws out a particular content for its intellectual or logical qualities and, therefore, suppresses other elements as irrelevant. ‘Concrete’ literally means ‘grown together’. Concrete thinking sees a more or less undifferentiated whole in which thought, feeling and sensation are mixed up together and it is, therefore, wedded to the primacy of ‘facts’ as witnessed by sense-perception.

In the museum design context, the orientation of particular participants in a project tends to make use of a pattern of abstract and concrete psychological functions peculiar to a specific practice or museum function. Concretism emerges in moments that rely on what one thinks of as ‘common sense’. And in environments as thoroughly infused with intellectual and aesthetic concerns as is the museum it can be a ‘rare’ and, therefore, a very valuable commodity. It represents that ability to ignore complex disputes and conflicts of interest and to get to the heart of the practical situation, to be decisive and to act with mind, body and soul together. Jung puts a less positive tone on this:

*With civilized man, concretism of thought consists in the inability to conceive of anything which differs from the immediately obvious external facts, or in the inability to discriminate subjective feeling from the sense-given object.*<sup>53</sup>

Abstraction, as abstract thinking, sensation and feeling, surfaces wherever intellectual aesthetic or moral concerns are focussed. It allows different concerns and interests to be differentiated and articulated and creates the arena in which contradiction and counteraction can be consciously worked on by the intellect, the imagination and the higher emotions.



The range of variables used by Hofstede, Bourdieu, Lefebvre, Freud and Jung in the construction of social and psycho-social dimensions immediately suggests overlaps, interactions and graphic juxtapositions potentially productive of significant subspaces - indeed, some are unavoidably entailed in the original material and have already been illustrated. It is now possible to consider whether some distillation of these ingredients may generate a 'root' scheme of just a few dimensions - ideally no more than three - that is both clear in its visualization and yet suitable for recovering specific distinctions uncovered in the larger heterogeneous 'scheme' outlined above. I believe that existentialist ideas offer a method of accommodating the broad sweep and the recoverable depth required.

### **Involvement and Location**

The range of dimensions explored above suggests a complex differentiation of Being and an emphasis on being-in-the-world. Heidegger's approach to resolving such confusion was through the adoption of the Da-sein (the 'being-there').

53. *ibid.* p.534.

*It is in the world, but not in the way that physical objects are in the world. What puts it in the world is the complex of its interests and attitudes.*<sup>54</sup>

Given the object of the current project, this insight suggests an approach to the visualization of psycho-social dimensions which is both simple and appropriate. To account for “interests and attitudes” and related ideas of ‘concerns’ and ‘demeanour’ is both to embrace the dynamic and static qualities that signal involvement and position (or posture) and to indicate recoverable depths of the social and the psychological. Featherstone draws attention to the behavioural interpretation of this requirement:

*...if one ‘descends’ to the everyday practices of embodied persons held together in webs of interdependencies and power balances with other people, it can be argued that the need to glean clues and information about the other’s power potential, status and social standing by reading the other person’s demeanour will continue.*<sup>55</sup>

and makes the connection with the notion of a society at once stratified by differences in ‘lifestyle’ and to some extent freed of the rigid rules that reinforce social hierarchy: what is sometimes called the ‘no rules only choices’ view:

*(...the acknowledgement of the right of individuals to enjoy whatever popular pleasures they desire without encountering prudery or moral censure) does not signify anything as dramatic as the implosion of the social space but should be regarded merely as a new move within it.*<sup>56</sup>

54. AYER, A. J. *Philosophy in the Twentieth Century*. Weidenfeld & Nicolson, 1982. p.227.

55. FEATHERSTONE, Mike. *Consumer Culture & Post-modernism*. Sage, 1991. p.20.

56. *ibid.* p.84.

One may ask to what extent the conception of ‘lifestyle’, as constructed by an “expanding class fraction centrally concerned with the production and dissemination of consumer imagery and information” carries over into the limited field of museum organization and design where this ‘new petite bourgeoisie’s’ views are resisted and

contested in ways which may parallel or counteract those operating in the larger social space.

The leisured academic ‘elite’, which formerly held a controlling interest and position in museums, has been, to a large extent, supplanted by a section of the new administrative class of ‘middle managers’ and ‘information workers’. Concomitant with this move from academic to administrative values is that the aspirations and demeanour of the visiting public now more closely coincide with those of senior museum staff. One may suggest then that in social space the boundary between the museum organization and its immediate social context has been softened. On the other side of this coin is the spread of the culture of consumerism to embrace leisure, education, and cultural products. In the museum these are clearly visible as manifestations of a larger process of symbolic production and material consumerism, which has been largely constructed in the post-War, post-industrial period. This process may be seen in part as a reconstruction or extension of the capitalist logic of mass production and in part as a simulation of material exchange or as its substitution by symbolic exchange.

If one accepts the notion that a complex of interests and attitudes is what puts the individual in the world, what we are presented with is the requirement for an existential dimension to social space which facilitates the mapping of personal investments and concerns in the world that range from the symbolic to the material (Figure 2.2.4.)

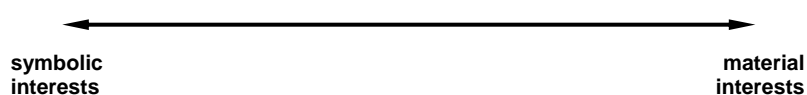


Figure 2.2.4

Symbolic-material dimension of social interests.

In this dimension we can visualize the tensions involved in the museum activities of acquisition, documentation, conservation, research, exhibition, and interpretation. In general, traditional museographic practices tend to focus on the ‘material’ whilst the ‘new museology’ tends to set these off against interests focussed on the symbolic (Figure 2.2.5.)

	symbolic interests	material interests
<b>ACQUISITION</b>	<ul style="list-style-type: none"> <li>• authenticity</li> <li>• cultural value</li> <li>• position in narrative</li> </ul>	<ul style="list-style-type: none"> <li>• uniqueness</li> <li>• monetary value</li> <li>• position in taxonomy</li> </ul>
<b>DOCUMENTATION</b>	<ul style="list-style-type: none"> <li>• associations: events, persons, places</li> <li>• iconicity</li> </ul>	<ul style="list-style-type: none"> <li>• provenance</li> <li>• material composition &amp; condition</li> <li>• physical size, location and appearance</li> </ul>
<b>CONSERVATION</b>	<ul style="list-style-type: none"> <li>• preserving function and meaning</li> </ul>	<ul style="list-style-type: none"> <li>• preventing physical deterioration</li> </ul>
<b>RESEARCH</b>	<ul style="list-style-type: none"> <li>• narrative potential</li> </ul>	<ul style="list-style-type: none"> <li>• factual certainty</li> </ul>
<b>EXHIBITION</b>	<ul style="list-style-type: none"> <li>• subject communication</li> </ul>	<ul style="list-style-type: none"> <li>• object display</li> </ul>
<b>INTERPRETATION</b>	<ul style="list-style-type: none"> <li>• narrative exposition</li> <li>• cultural exploitation</li> </ul>	<ul style="list-style-type: none"> <li>• identification</li> <li>• taxonomic placement</li> </ul>

Figure 2.2.5

Symbolic-material interests dimension of museum practices.

The parallel with design emphasizes the former predominance of material interests, in both the larger industrial sphere and in the museum, and in the post-industrial context the more openly and continuously contested material and symbolic interests. In relation to the modernism/postmodernism debate, therefore, the theoretical proposition to which I am inclined is that whereas modernism entails choosing between opposing terms, between counteracting demands on our attention, and is therefore concerned with questions of *Either/Or*, the postmodern condition is characterized by the need to

cope with the tensions between the contradictory and the counteracting which are themselves shifting and changing, by the need to deal with questions of accommodation, of *Both /And*.

The process of resolving questions of conflicting social interests, which once involved a search for truth and for stability, can be pictured as a to and fro response to the pull of the material and of the symbolic, as a sequence of defined positions along a scale of possibilities that edge towards some acceptable common ground, as a conversation of gestures (Figure 2.2.6.)

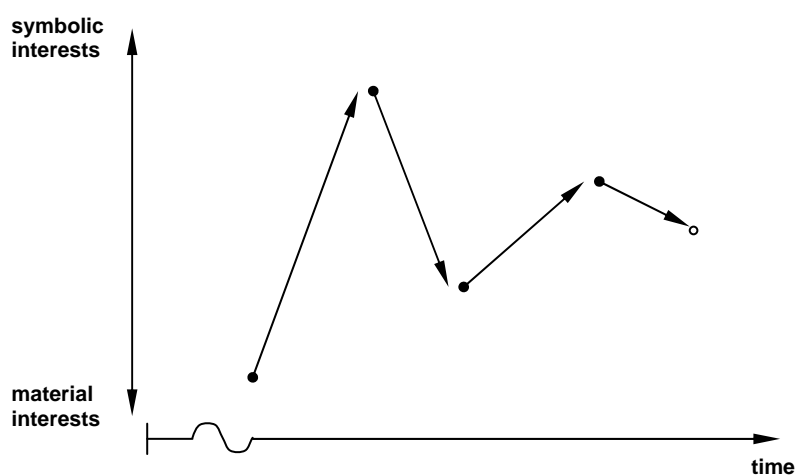


Figure 2.2.6

The contest of symbolic and material interests played out as a search for common ground.

This dialogic or dialectical process has been radically altered by postmodern conditions. The contingency of our knowledges and interests is now instantaneously recognizable as the mutual accommodation of contradictory and counteracting positions which subtly shift in response to each other's movements creating a pattern of dynamic tensions (Figure 2.2.7.) The trajectory of 'action' has been replaced by the web of interaction and, for your average organized worker, excitement by stress.



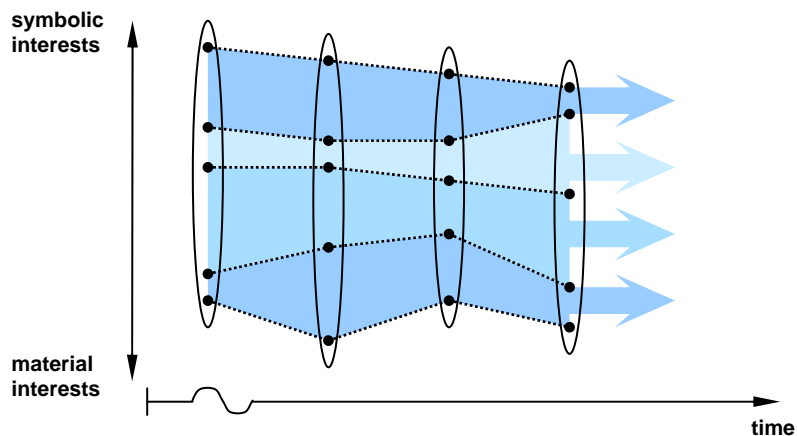


Figure 2.2.7

The mutual accommodation of symbolic and material interests played out as a pattern of shifting tensions.

### Interests and Concerns in Social Space

The terms 'demeanour', 'attitudes', 'interests' and 'concerns' tend to be used as generalizations and to some extent interchangeably. However, in constructing models of social space, their dimensional implications may be subtly different and therefore, for heuristic reasons at least, perhaps they should be differentiated.

'Demeanour' implies a manner of conducting oneself in social situations, a typical behaviour that is itself the outward sign of status, position, power. It relies not on conscious thought for its expression nor even on conscious action but rather on habit and routine - on posture rather than position and reflex rather than response. We best observe a person's demeanour through the conversation of gesture entailed in unselfconscious social interaction. Through demeanour one constructs the 'other' as a social entity and one possible scale of demeanour would be cooperative-competitive (Figure 2.2.8)<sup>57</sup>

57. Featherstone also draws attention to the postmodern confusion of this idea. Where the culture of consumption invites the individual to "regard their dress and consumer goods as communicators". [FEATHERSTONE, 1991, p.26-7.] In this the question of 'demeanour' is brought into the realm of self-conscious conduct. These gestures may be orchestrated to alternately communicate both a 'regard for others' and a 'pleasing of oneself'. The latter may be regarded by others as an uncooperative and, therefore, competitive display.

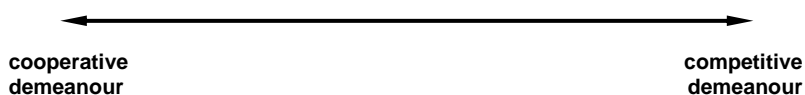
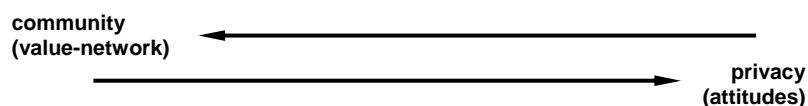


Figure 2.2.8

Cooperative-competitive social dimension of demeanour.

‘Attitudes’ implies expressed predisposition, an ideology (rather than conversation) of gesture that reveals itself in the style, as much as in the content, of our transmissions. Through readings of our demeanour attitudes ‘represent’ (pre-present) the positions we will assume in acting out any part in social processes. Such expressed predispositions need not be reasonable, rational nor even serendipitous, though there is a recent strain in the myth of the anti-hero, which posits ‘bad attitude’ as a saving quality. There is a clue in this as to why the concept of attitude is ultimately the least productive of the variables under consideration for a root scheme. Sartre explores the two ‘attitudes’ constitutive of the ‘private’ and contrasts these with the ‘communal’. The individual can either seek confirmation of its existence by being predisposed to the other’s attentions - the attitude of love-language-masochism - or it can do so by subjecting the other to its own attentions - the attitude of indifference-desire-hate-sadism. No choice between these attitudes is possible because in practice each eventually fails and motivates the adoption of the other: through attitude one constructs oneself as a social entity, but, as a personal gambit it is circular (Figure 2.2.9.)<sup>58</sup>



58. SARTRE, Jean-Paul. [1943] Figure 2.2.9

*Being and Nothingness*. Trans. Hazel E. Barnes. Methuen, 1958. pp.364-412.

Community-privacy social dimension.

Undoubtedly I have not done justice to the detailed and subtle exposition of the original. However, I believe the central point to be unequivocal: ‘attitude’ forms a closed circuit in the personal realm and, therefore, although it may offer a certain clarity, is not really open to further differentiation in spatial terms.

Having characterized the personal sphere as a construction of conflict with the other, Sartre goes on to discuss the communal sphere as a construction of being (in community) with the other, a construction always dependent upon the appearance of an external other. The experience of community is that of being the object of someone else’s attentions.

*...what I experience is a being-outside in which I am organized with the Other in an indissoluble objective whole, a whole in which I am fundamentally no longer distinct from the Other but which I agree in solidarity with the Other to constitute.*<sup>59</sup>

In the museum context the very fact that the products of the design process are worked on by oneself with others and that they are apprehended by third parties constitutes the community at work as an objective entity, as an *Us*. It is a fact of organizational life, even at its most cooperative, therefore, that what is felt to be 'outside' the practical situation is what constructs the experience of solidarity. At the same time it reinforces the individual alienation, which is objectification by others, entailed in the 'internal' conflict of working with others.

*...the one who experiences himself as constituting an *Us* with other men feels himself trapped among an infinity of strange existences; he is alienated radically and without recourse.*<sup>60</sup>

The efficacy of material and symbolic interests and concerns is always related to this dynamic of communal experience. In those moments when one attempts to reclaim the object (the design as object) from its embeddedness in symbolic structures in order to work on it in its materiality what one is also doing is breaking that experience of solidarity and reinstating the primacy of the subjectivity, of the private realm. Conversely, to the extent that the object is released to communal visibility, its materiality is submerged in order to construct its meaning for others (Figure 2.2.10.) And when one engages such symbolic interests and concerns one is also admitting oneself to the organizational objectivity that the attentions of others construct.

59. *ibid.* p.418.

60. *ibid.* p.419.

Just as a community is objectified by the attentions of others outside, it constitutes itself as a 'subject' the moment

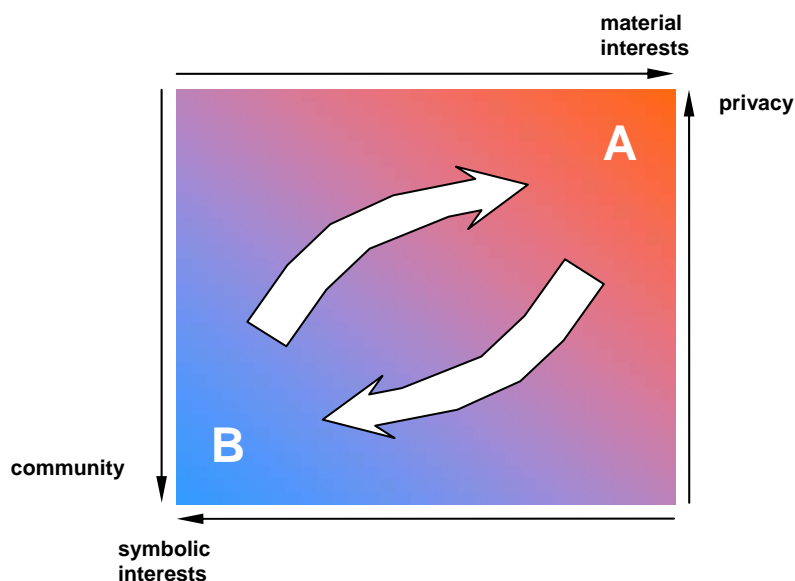


Figure 2.2.10

The movement to recapture the materiality of the object (A) entails a resort to attitudinal play wherein the subject arrests the Other's (shared) symbolic interest in the object by alternately seeking attention from and giving it to the Other. The movement to release the object to communal visibility (B) reverses the flow of interests and promotes the (re)construction of meaning.

a cooperative action is engaged. Such action is acquisitive, subsuming, attention-giving in which one unselfconsciously participates and it immediately objectifies what is 'outside', that is, other than the *We* in which one is participating. In so far as the *We* is against what is outside the community it only admits the objectified and digested body of the world into its work: the *We* is imperialistic. The *Us* responds to the attentions of the world as an object of what is outside itself. Its work, therefore, is subsumed by the world: whether compliantly or defiantly the *Us* is bound into slavery.

Moving on from the circularity of attitudes in the personal sphere, it seems that in the communal sphere 'attitude' is no longer the appropriate question: it is simply not possible for the collectivity to adopt an attitude in the sense in which the individuality must. From amongst an unlimited range of possible interests, a particular configur-

ation defines the community's objective boundary. Nothing in the experience of community melds this together into a static predisposition, rather it comes into being contingently and is dynamic.

The social world is constituted by a network of interests that places us in relation to others.

*The everyday world, then, is already a world that implies an indefinite number of people engaged in interlocking and mutually supportive tasks.*<sup>61</sup>

'Interests' implies a normative condition of values: within a group, common interests and the interests of the individual may be defined and may coincide or may conflict to a greater or lesser degree. Interests are a reflection of possible direct influence on status, performance, confidence, reward, etc. as in statements of the type: "this is not in your interests: your interests would be better served by ..." Involvement in a practical situation implies 'interests' in the 'concrete' sense of a binding set of assignments and references to others which is embodied in the work that we do.

*In our 'description' of that environment which is closest to us - the work-world of the craftsman, for example - the outcome was that along with the equipment to be found when one is at work [in Arbeit], these Others far whom the 'work' ["Werk"] is destined are encountered too.*<sup>62</sup>

Through the embodied quality of interests the aesthetic enters our works.

Involvement also implies 'concerns' in the 'abstract' sense of particular conscious objects which are the product of 'concrete relations with others' and that one is bound to pursue in respect of the contingent experiences of being-for and being-with others. Unlike interests, concerns tend to be contingently driven by ideological or by practical

61. MACQUARRIE, 1972, p.77.

62. HEIDEGGER, Martin. *Being and Time*. Trans. John Macquarrie & Edward Robinson. Oxford: Basil Blackwell, 1962. p.153.

rational thought. They are a reflection of what occupies thought, what motivates, what one consciously pursues or avoids in life, what one cares about for whatever reason, as in expressions such as: “but I am very concerned about this: I am involved whether you like it or not!” The everyday world of the community: “is an a priori condition of all my practical concerns”.<sup>63</sup>

If ‘interests’ are assigned to the individual or collective as object then ‘concerns’ are expressed by them as subject. They are the two sides of the coin of social dynamics. In the same sense demeanour and attitude are the object and subject sides of the social status (statics/stasis) coin. To visually cue the notion that it is in interests and concerns that the real ‘freedom’ of movement is realized, I shall use the graphic short-hand of a triangle on a wide base to indicate generic social space of this type of construction (Figure 2.2. 11.)

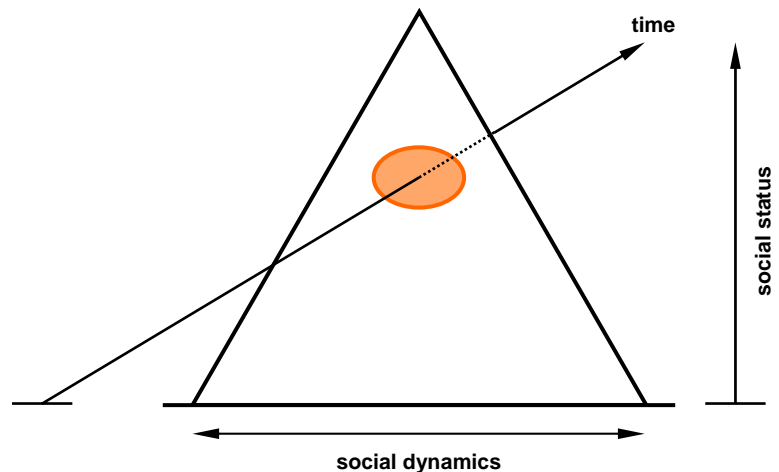


Figure 2.2.11

The generic social space constructed by a dimension of social dynamics and one of social status ('status' here is used to denote outward signs or expressions of power, position, condition, etc.) The space becomes activated on addition of a linear dimension of time.

63. MACQUARRIE, 1972, p.99.



It may be possible to generalize that certain types of symbolic structure are typical of the phases of conservative, cosmetic and radical change in an organization such as a museum - one may expect that the demands made upon participants in design in these different change contexts will be such as to favour certain individuals and particular groupings (heterogeneous and/or homogenous in character). These individuals/groupings will, by definition, exhibit specific combinations of interests and concerns, which may be mapped in various socio-cultural/-technical/-economic subspaces of the social space. In Gasparski's terms, the requirements for 'prophylactic', 'therapeutic', and 'innovational' design approaches to complex socio-technical systems may be predictable to some degree.<sup>64</sup> Whether or not this is the case for a 'system' such as a museum remains to be seen. I would argue that cultural and economic content is inherent and inextricable in the large-scale socio-technical system, that museums collectively embody socio-technical as much as socio-economic and socio-cultural processes, and therefore that equations of process and structure are as likely to be found in museums as they are in any other 'complex' socio-cultural/-economic/-technical system.

64. GASPARI, w. "On the General Theory (Praxiology) of Design", Department of Praxiology, Polish Academy of Sciences, 1985?

## 2.3 Documentary Space

### Physics and Physiology

The physical quality of the written word and of the drawing is identical: it is material inscription, a mark on paper, a substantial object which, as icon, is the analogue of an image. It is able to reflect light in such a way as to cause a pattern of variations in light intensity to be focussed on the retina. The image so created always remains in a simple relation to the original: it may undergo only a limited number of types of two-dimensional distortion - trapezoidal (e.g. perspective), elastic/stretching, magnifying, and reflection (e.g. via a mirror). To maintain readability, visual accessibility of information content, these distortions and their combination may not be extreme.

The eye is intelligent, part of the being, part of the brain.<sup>1</sup> In physical terms, the visual process is continuous with cognitive, neurological and physiological processes in general. A seamless organic whole of such complexity is, and probably will remain, beyond the scope of an atomistic analytical understanding. Therefore one cannot elaborate profitably an organismic space of the document, a physical space of energetics that encompasses reader and read in a single physio-logical (natural and rational) system. Such a space appears to be closed to perception, a 'black box', a 'Chinese room', an impenetrable realm of indeterminate internal structure and dimensionality that operates in the unfathomable interstices between phenomena.

What one may understand of the physics of the seeing/hearing - thinking/remembering - writing/drawing process is of no immediate practical use: it does not help one to see/hear - think/remember - write/draw any differently or any better.

1. *The retina ... is a specialized part of the surface of the brain ... it retains typical brain cells lying between the receptors and the optic nerve ... Some of the data processing for perception takes place in the eye which is thus an integral part of the brain.*

GREGORY, Richard L. *Eye and Brain*. Weidenfeld and Nicolson, 1966. p.45-6.

*...eyes require intelligence to identify and locate objects in space, but intelligent brains could hardly have developed without eyes.*

GREGORY, Richard L. *The Intelligent Eye*. Weidenfeld and Nicolson, 1970. p.13.



## Subjunctive Constructs

Certain of the products of the design process are referred to by Potter as 'design constructs'.<sup>2</sup> When considering the space in which they are situated, we must make a careful distinction between the putative three-dimensionality of the designed object, which 'exists' in the physical space of its practical use - the Breuer Chair in the executive lounge - and the subjunctive space in which the object of design as metaphor may stand in for any of a wide range of possible relations in the world. "A subjunctive space is a qualified region within which certain rules hold - the space, say, of play or ritual".<sup>3</sup> The design construct is not being put to 'end use': the chair is used to sit on, the chair design to allow the chair to be created. Rather it plays a part in a specific ritualized process - industrial production - which has been characterized as the realm of 'socially constructed technological systems'.<sup>4</sup> In such systems social space meets geography and 'physics' head on: we enter a world defined multidimensionally.

In this sense the space of the museum collection is a model for the space of the design construct. This is the subjunctive space in which one Roman vase may stand in for many, in which the variety of relations between collection items stands in for the world as a whole. What is more, physical spatial relations in the museum exhibition may stand in for a variety of types of space in the world at large - taxonomic, social, cultural, economic, temporal, etc.

2. POTTER, Norman. *Models and Constructs: Margin Notes to a Design Culture*. Hyphen Press, 1990.

3. BRYSON, Norman., Michael Ann Holly & Keith Moxey (eds.) *Visual Theory*. Polity Press, 1991. p.246 ?

4. BIJKER, Weibe E., Thomas P. Hughes & Trevor Pinch. (eds.) *The Social Construction of Technological Systems*. MIT Press, 1987.

5. BRYSON, 1991. p.246-7.

*'Subjunctive space' is the space in which real things may be substituted for the absent. It is the space of 'real metaphor. Where the hobbyhorse stands in for the horse, the reproduction for the artefact and "Substitutes are effective in the space in which they are put because they are only 'real' in that space"... In most of the traditions of world art (only Western modernism seems to offer an alternative) images have served to correct the 'defect of distance'... to transform the present in such a way as to make the absent present.*<sup>5</sup>

Whereas in this ‘traditional’ formulation what is absent is in the past - either something or someone is lost in the past or is known to be physically at a distance and, therefore, to have been experienced in another place/time - in the current context, that of design, what is absent is that which may come to be. The design is a thing/message/place/system that is projected into an as yet undecided future. In this, the notion of physical distance is rendered ambiguous and the experience of a substitution rendered only in a virtual sense. This is the simulation of substitution, the creation of virtual subjunctive space, the space of the design as a proposition. This refers, therefore, to the products of the design process, to design documents, drawings and models, to design constructs.

In the subjunctive space of traditional art, the space of ‘real’ metaphor, what is enfolded in the act of substitution, the process of replacement, is that distant, past thing that is absent, that is, the object of our nostalgic desires. In illusionistic art we imagine, visualize and invoke the absent thing, that which used to be. In the equivalent virtual subjunctive space of the design construct in contrast, though it may also have an artistic ‘mortal’ content, what is enfolded is that imagined future thing which is virtually present, that deferred presence which creates the possibility of meaning in the material of the world. In the design construct we imagine, visualize and invoke the possible, the thing that has yet to be.

### **Semiosis: Substitution, Simulation, Simulacrum**

When one talks of a ‘semiosis’ in relation to the design construct one has to qualify what is meant by terms such as ‘substitution’, ‘simulation’, and the ‘simulacrum’.

In the documentary space of the design construct the substitution is for a thing virtually present as a negotiable project and therefore not yet present. The substitution is far a mere possibility, not for an absent actuality.

We tend to think of 'simulation', as conceived by Baudrillard, as a realized model that stands in for the real, as one reality, a hyperreality, standing in for another, a lost actuality. "It is the generation by models of a real without origin or reality: a hyperreal".<sup>6</sup> This lost actuality is the 'home' for which the term 'nostalgia' implies we long. "When the real is no longer what it used to be, nostalgia assumes its full meaning".<sup>7</sup> Simulation implies not merely substitution, that one thing may stand in for another thing, but an identification, at an emotional level, at the level of the self, with a world known or imagined as a place to which we ideally belong. In the design construct nostalgia is itself a simulation. It is not an ideal world for which we long but rather a metaphysical reality, the hyperreality of the cultural. In the documentary space the designer does not engage a semiosis of physical form, of the monumental or of the ephemeral for that matter, the artist does. In documentary space the art object may be an object of linguistic and visual speculation, but it is primarily a physical object. Rather, the designer engages a semiosis of the metaphysical form, the imaginal which is at one remove from the physical and, therefore, only an object of linguistic and visual speculation. The physicality of the documentary form in design gives rise to a trivial semiotics in comparison to that of its content. In the design process it is the design that matters not the design drawing as a work of art. The design is first a mental construct, a perceptual and cognitive construct, rather than a physical, a material and sensual one.

The simulacrum, as image, representation and semblance is the object of this latter notion of design as a

6. BAUDRILLARD, Jean. "Simulacra and Simulations", in *Selected Writings*. introduced and edited by Mark POSTER Polity Press, 1988. p.166.

7. *ibid.* p.171.

mental construct, a perceptual and cognitive construct. What is created in the simulacrum is pure image which may embody the fulfilment of wishes and dreams, fantasy and desire, rather more certainly than it may the quality of the absent (or present) material of the world. The simulacrum is not merely a substitution it transcends substitution, becomes a parallel reality literally 'in the image of' that which we desire. Neither is the simulacrum concerned with simulation in the primary sense of realizing a virtual object that is constructed in the spatiality of an 'original' object. It maintains its own spatiality, proclaims its separate identity and holds forth the possibility of an equality of status in the material culture. Where the substitution is a taking-the-place-of the absent; its 'dis-placement', and the simulation is its reproduction, its 're-placement', the simulacrum is the doubling of the place of the object (present or absent), its 're-presentation':

*...an operation to deter every real process by its operational double, a metastable, programmatic, perfect descriptive machine which provides all the signs of the real and short-circuits all its vicissitudes.*<sup>8</sup>

The simulacra of design are the products of the design process, the documents, drawings and records that constitute the design as a projected reality. They re-present what is cognitively projected in the design process by making it visible. They construct their own spatiality - a documentary spatiality - and proclaim their identity in the material culture. Documentary space is subjunctive to the physical space of the designed object but also to the social/psycho-social space of the design programme. The content of the documentary space is only 'real' in that space: to call it a 'substitution' for or a 'simulation' of another reality is, as we have seen, only possible in carefully qualified senses.

8. *ibid.* p.167.

9. ECO, Umberto. *A Theory of Semiotics*. Bloomington: Indiana University Press, 1979.

Eco starts with the Peircian notion of semiosis:

*By semiosis I mean an action, an influence, which is, or involves, a cooperation of three subjects, such as a sign, its object and its interpretant, this tri-relative influence not being in any way resolvable into actions between pairs.* [PEIRCE, C. S. *Collected Papers*. Harvard University Press, 1931-58. vol 5, p.484. quoted on p.15.]

The connectedness of everything within the system of signs which semiosis as action entails is made clear in a later explanation of the term 'interpretant' (Peirce was apparently inconsistent in its use):

*The interpretant is not the interpreter... The interpretant is that which guarantees the validity of the sign, even in the absence of the interpreter... in order to establish what the interpretant of a sign is, it is necessary to name it by means of another sign which in turn has another interpretant to be named by another sign and so on. At this point there begins a process of unlimited semiosis ...*[p.68.]

10. *All media of representation can rely on isomorphic and on non-isomorphic references. They are partly analogues, partly signs. In principle, there is no difference in this respect between verbal and non-verbal languages.*

ARNHEIM, Rudolf. *Visual Thinking*. Faber & Faber, 1969. p.251.

11. LEFEBVRE, Henri. [1974] *The Production of Space*. Trans. Donald Nicholson-Smith. Basil Blackwell, 1991. pp.27-30.

## Semiosis: Content and Form

The social or psychosocial space of language may encompass the verbal and the imaginal. A visual language of signs and symbols, howsoever formed, is developed and operates within some framework of a grammar, a syntax, a semantics, a vocabulary, that is, it entails a semiosis.<sup>9</sup> The construct of abstract graphic elements (point, line, square, circle, triangle, etc.), that of alphabetic, numeric or pictographic characters, the diagrammatic analogue (pie chart, graph, histogram, bubble diagram, etc.), the iconography, and the systems of impressionistic, expressionistic and naturalistic pictorial representation all construct/present a range of 'documentary' forms that is continuous with the linguistic/communicative possibilities of material culture, ritual, gesture and speech.<sup>10</sup>

The dimensions that these documentary forms may have in common are of interest here. In design one can see the issue clearly. The products of the design process, including documentary evidence of the design programme and design ideology, are diverse in physical form - computer disks, technical drawings, manuscript and printed texts, 3-dimensional (and virtual) models. What they have in common is their relation to the object of design. This connection is cognitive and perceptual in that the relation between the document and the object of design may vary in cognitive style and in perceptual compass.

This suggests that in the documentary space of design one constructs the interface between a naturalist simplicity, a belief in the 'substantial reality' of the elements of signification and evocation, an argument about documentary form, and an 'idealist transparency', a belief that what is present to the mind is indeed present, an argument about documentary content.<sup>11</sup> Therefore, as a minimum,

the dimensions of documentary space should allow a mapping of form and content (Figure 2.3.1.)

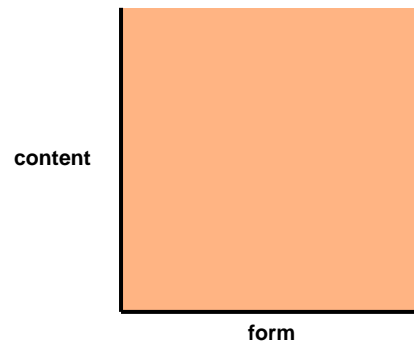


Figure 2.3.1

Documentary space constructed by a generic dimension of form and one of content.

In each dimension this mapping may either involve a 'taxonomy', a differentiated range of possibilities, or a 'measure', a scale, a differentiable continuum of values.

In the case of documentary form, an approach concerned with the 'measure' of forms seems inappropriate: it suggests a value system of marginal interest - literally, the size or scale of the documentary form - how many pages in a report, the area of drawings in a technical package, the amount of ink/pencil used, etc.! A taxonomy, on the other hand, can differentiate between the products of different kinds of skilled/communicative activity in the design context, i.e. the various types of written, drawn, three-dimensionally modelled, and electronically and audio-visually recorded products of the design process (Figure 2.3.2.)

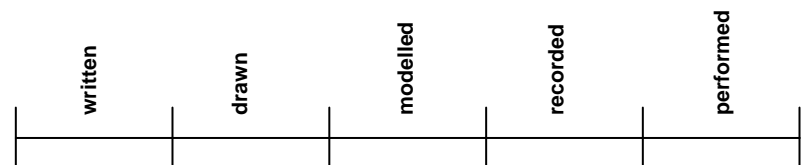


Figure 2.3.2

Differentiated range of possible generic outputs of skilled/communicative activity.

In the case of documentary content, either approach seems possible. One might construct a taxonomy of content by making reference to broad categories of information in a design project, i.e. the conceptual, the programmatic, the contextual, the ideological and the contractual (Figure 2.3.3.)

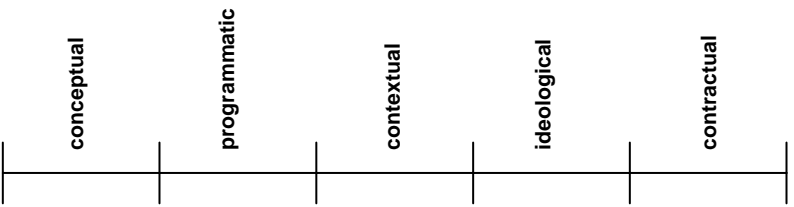


Figure 2.3.3  
Differentiated range of possible generic information categories.

Equally one might construct a measure of the scope of the documentary content in relation to the maximum and minimum that may be ‘acquired’ in a given practical situation.<sup>12</sup> At one extreme a document may refer to the design holistically and therefore have a global scope, and at the other extreme to the most specific aspect or the smallest detail that remains relevant, and therefore have a local scope (Figure 2.3.4.)

12. ‘Acquired’ is used here in the ergonomic sense of ‘what may be located and attended to in a single act of perception.’  
*There are no watertight compartments of detection, recognition and identification, but rather a continuum.*  
[OVERINGTON, Ian. *Vision and Acquisition*, Pentech Press, 1976, p.2.]

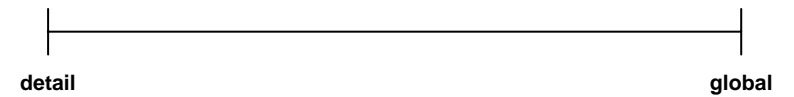


Figure 2.3.4  
Differentiable scale of possible scopes of documentary content.

## 2.4 Paradigmatic Space: ideology and philosophy

### Design Theory and Theory in Design

*As a design researcher the author takes on the role of theorist. This is a very different kind of statement to that which the designer as a reflective practitioner might make: as an agent of change the designer takes on the role of auteur.*

In the former statement the implications are that some systematic study of or through design is involved with the intention of knowledge creation, that writing is an important productive activity and therefore that the possibilities and limitations of language are of central concern, and perhaps that one literary genre or another is to be mastered, that in creating and forwarding knowledge the work must deal with epistemological issues and that this ultimately entails a philosophical position.

In the latter statement the immediate implications are rather different: that some preparation for the productive actions of others is involved with the intention of changing a practical situation, that the subject is associated with a particular class of practitioners whose skills, knowledge, experience and standards of conduct conventionally match certain expectations in relation to a type of practical situation, that a central, nodal, in some sense, 'crucial' creative and communicative role is being claimed that involves the production of realizable plans.

In the case of the researcher, theory is ultimately made explicit. In the case of the designer, theory tends to remain implicit. These conclusions may appear straightforward: their significance, however, is pivotal. The designer *qua* designer is not primarily involved with the language of sovereign rationality, the language of theoretical exposi-



tion, with a philosophical language. The language of which the designer makes most powerful use is an everyday language in the sense of exploiting the common narrative properties of the news story, biography, history, and fiction, the language of engaged experience, with an ideological language. What must be remembered, however, is that this linguistic performance is not in itself the most important aspect of the designer's communicative practice: it is merely the necessary supplement to a larger realm of visual communication and material culture.

Feyerabend's argument concerning the historical separability of the way a 'scientific' result is arrived at, which is "idiosyncratic and culture dependent", from the result itself, which reflects an actuality that exists, always did exist and always will exist, he calls the 'separability assumption'. Given that our methods of arriving at scientific results are not infallible, as evidenced by the constant improvement, revision and substitution of older findings by new ones, we constantly layer more reasonable beliefs over those that are less so. This idea, that only "entities postulated by reasonable beliefs can be separated from their history" he calls the 'modified separability assumption'. However, what it is 'reasonable' to believe clearly changes. Given the various accounts of the pattern of scientific development/change,<sup>1</sup> it seems reasonable to assume that what seems reasonable in 1996 will not so seem in 2996. Feyerabend's conclusion is that:

*Scientific entities (and for that matter, all entities) are projections and thus tied to the theory, the ideology, the culture that postulates and projects them.*<sup>2</sup>

In effect he is arguing that 'theory' is not independent of its history either, that in any articulated position there is an ideological dimension that is culturally embedded. The

1. FOUCAULT, Michel. [1966] *The Order of Things: An Archaeology of the Human Sciences*. Tavistock, 1970.  
FOUCAULT, Michel. [1969] *The Archaeology of Knowledge* Trans. A M Sheridan Smith. Tavistock, 1972.  
KUHN, Thomas S. *The Structure of Scientific Revolutions*. 2nd Ed. (enlarged) University of Chicago Press, 1970.  
POPPER, Karl R. [1963] *Conjectures and Refutations: The Growth of Scientific Knowledge*. Fifth edn. Routledge, 1989.
2. FEYERABEND, Paul. [1975] *Against Method*. Revised Ed. London: Verso, 1988. p.265.

consequences of this 'reasonable' proposition are, of course, paradoxical and infinitely regressive if treated reflexively.<sup>3</sup> However, at 'face value' the implications for the modelling of museum•design•organization (or any other formulation of Praxis for that matter) are that the social space (how-so-ever delineated) and the paradigmatic space may only be visualized as actively enfolded in each other. Reflexivity then simply implies a looping succession of enfoldings that progressively spiral the existent away from a simply mediated sense of 'Being' towards the distantly and multiply mediated ideas, possessions, memories, values, etc. of synthetic or inauthentic experience.

Social and cultural activity  
 which is underpinned by contingent values and beliefs  
 is itself dependent upon  
 social and cultural activity  
 which is underpinned by contingent values and beliefs  
 that are dependent upon  
 social and cultural activity  
 which ...

Accepting the possibility of articulating successive layers of discourse upon discourse, a theory of ideologies in design philosophy would constitute an 'opening up' of the ideological space embedded in the ideological space of design. Be that as it may, what concerns us more immediately, in developing a model of museum design organization, is the possibility of a study that visualizes the radically different spaces of 'design' that may be enfolded in each other to generate not only first and second level (descriptive and discursive) accounts of design philosophy (design ideology) but also of mediated (second level) accounts of the designed object, design programme (the object of design), and design process.

3. LAWSON, Hilary. *Reflexivity: The Postmodern Predicament*. London: Hutchinson, 1985.

## Ideology

In his introduction to ideology, Terry Eagleton points up some crucial questions about the nature of grounded action and of affective beliefs. Although, as he shows early in his discussion, there is no definition of 'ideology' to which all others may be reduced, the various notions of ideology nevertheless share certain attributes. With respect to the ontological and epistemological views of Althusser, for instance, there is no question that ideology is based on some kind of knowledge. What is ironic is that this knowledge is pragmatic, that is, subjective and experiential, rather than primarily cognitive and ideal.<sup>4</sup> So far as questions of truth or falsity are concerned the basis of this knowledge is an ontological one. Certain events, conditions, objects are 'real', that is, they have an 'ontic' truth which is realized in the subject's experience. To say that theory underpins every action, including every speech act, is therefore not strictly speaking a question of ideology. The implied rationality, or practical reason, of theory may be missing from the ideological stance. This insight then is of central interest in areas of human activity in which the subject pushes beyond the limits of practical rationality.

The creative practitioner, in the present context specifically the designer, is engaged in practical situations in which the absence of adequate information precludes strictly analytical approaches to decision making and problem solving. An epistemological complexity precludes coherent practical reasoning in that the subject must act to change situations that are characterized by incompatible interests, understandings and qualities, and, even if these two factors could be overcome (which in the design context, by definition, they cannot), the shortage of time and/or the impossibility of comprehensive instrumental means forces

4. Strictly speaking, for Althusser, theoretical knowledge is the only kind there is. See: EAGLETON, Terry. *Ideology: an introduction*. Verso, 1991, p.21.

the subject to act and to intervene without the comfort of a calculable probability of success and in the 'knowledge' that the actions/interventions undertaken will constitute a test of the subject's claim to be a designer. It is often said that 'a designer is only as good as his or her last job'.

Where cognitively based knowledge is the prime characteristic of a principled stance one may argue that 'theory', of an essentially epistemological (philosophical) kind, is the product. Whether or not the subject makes explicit all or any of this philosophy in practice (in praxis) is not the central point. What is the point is that the working out of a coherent theoretical position is not 'implied' in those kinds of practice that deal with radical indeterminacy and radical complexity. Neither is 'theoretical' underpinning ruled out: it is merely made contingent, that is, it becomes able to make only weak claims to truth. One may say then that when the creative practitioner, the designer, speaks what comes out *may* be 'philosophical' but must be 'ideological'.

### Irony and space

Such statements as designers make may be characterised as (1) making ontological propositions, both through the design itself in the form of drawings, models, specifications, etc., which are presented together to communicate the realizability of a product, and through forms of speech which seek to make coherent, reinforce and add 'invisible' dimensions of psycho-social and physical actuality to the design, and (2) representing a 'world view', an embodied set of values and beliefs about the nature of physical, social and mental 'reality'. The ironic quality of such world views is that they invariably take a narrative form.<sup>5</sup> The

5. CZARNIAWSKA-JOERGES, B. "Narration or Science? Collapsing the Division in Organization Studies", *Organization*, 2:1, Sage, 1995, pp.11-33.

Czarniawska-Joerges has summarized the case for researchers to adopt narrative forms in transmitting knowledge by arguing that, in the humanities and the social sciences in particular, an adequate legitimizing move has already been made. The evidence for this includes:

LYOTARD, Jean-François. [1979] *The Postmodern Condition: A Report on Knowledge*. Trans. Geoff Bennington & Brian Massumi. Manchester University Press, 1984.

and the development of interpretive approaches in the work of Jerome BRUNER (cognitive psychology); Donald McCLOSKEY (economics); Clifford GEERTZ (anthropology); and Richard H BROWN, Bruno LATOUR, Michael MULKAY, and Sharon TRAVEEK (sociology).

narrative form of design presentation, of the design programme, of designers' discourse in general, is 'ironic' in the sense that the values and beliefs embedded in what is said may often be contrary to those implicit in the normativity of the narrative transmission of knowledge. Therefore one must be clear about the source of this ironic potential: it is spatial.

In design the ideological/philosophical space of values and beliefs, however it is constructed or visualized, may be deferred, distorted and distanced and thereby enfolded into other quite distinctive and incommensurable spaces. The design product, as a physical entity, has extension in the dimensions of physical space and in time. In the space-time continuum its changing position, relative to other objects and to the observer, is its 'ontic' track - the actuality of the product. The design programme, as an heterogeneous body of documentary information, a mass of verbal, visual and material 'texts', a complex of 'signs' in the semiological sense, has both semantic and symbolic scope in a generic space of language. In this semiotic space the processes of signification and interpretation to which the 'document' is subjected constitute the ontological trace of the design. The design process, as a nexus of cognitive, practical and communicative activities, occupies a complex psycho-social space in which states of consciousness, affective behaviours, and social and material relations combine to construct a socially mediated view of design. In this psycho-social space complex patterns of interactivity constitute the design.

In the case of a documentary design product, such as a set of technical drawings and written specifications, the form and the content are physical and linguistic respectively, that is, they are logically unconnected. The space-time continuum in which the physical object is constructed

and the semiotic or narrative space in which the 'document' is constructed are incommensurable: they have no common dimensionality in which commensuration could be effected. This lack of logical connection is what permits irony - stable contradiction where we might reasonably expect coherent relation. Contradiction, however, implies speech and a range of opposing terms within a coherent language. This possibility of uncovering the irony is created in the process of reflecting on features and events in each of the other characteristic spaces of design in a common space of values and beliefs, of philosophy. A symmetrical relation thus emerges between the ideological and the philosophical. Theorising, an overtly epistemological and philosophical activity, engages in a process of abstracting the general from the particular, rules about what counts as knowledge from the myriad specific cases that are known. This is the process of deferring, distorting and distancing particular physical, social, or mental instances and of assimilating such qualities as emerge from them in a single 'place' within the reflective space of philosophy. This describes the effect of 'enfolding' one space in another. In theoretical work a variety of physical, social, mental and more exotic spaces are enfolded in philosophical space. In design the effect is reversed: any particular set of values and beliefs are deferred, distorted and distanced in the process of constructing the products, programme and process of a design. In physical space the track of the designed object is likely to make concrete different values and beliefs, than those that are embedded in the narrative, the semiotic trace, of a design document. And the values and beliefs implicit in a design process are likely to be different again as the dynamics of social interactivity, with all of the implications this has for emotional, practical, and rational effects on behaviour, construct the

cultural and political connotations of each specific act. The space of ideology, therefore, is enfolded in the physical, social and mental spaces in which design is constructed. The proposition is that an active space of values and beliefs, one in which work is being done, can be labelled the space of philosophy. But an enfolded space of values and beliefs, one which is thus inactive, can be labelled the space of ideology. The difference between the two spatial conditions 'active' and 'inactive' is one which can be accounted for by the constant dimension required for the activation of space: linear time.

### Mapping ideology/philosophy

6. HASSARD, John *Sociology and Organization Theory*. Cambridge University Press, 1993. p.49.

7. PARSONS, T. *The Social System*, Chicago: Free Press, 1951. and "An Outline of the Social System", in PARSONS, T. *Theories of Society*, New York: Free Press, 1965.

BUCKLEY, W. "Social Stratification and the Functional Theory of Differentiation", *American Sociological Review*, 23: pp.369-75.

COHEN, P. *Modern Social Theory*. Heinemann, 1968.

GOULDNER, A W. "Reciprocity and Autonomy in Functional Theory", in GROSS, L. (Ed.) *Symposium on Social Theory*, New York: Row Peterson, 1959.

ALLEN, V L. *Social Analysis: a Marxist Critique and Alternative*. Longmans, 1975.

8. HASSARD, 1993. p.50.

A number of different schemes for mapping the space of ideology/philosophy have been proposed in recent times by social and organization theorists. Each of these schemes has attempted to identify a set of paradigms, each paradigm amounting to an exclusive realm of methodology, a realm of applied values and beliefs incommensurable with all others. Wearing distinctly pluralist shades Hassard summarizes these

*...attempts to define the theory communities of social and organization theory as paradigm structures.*<sup>6</sup>

The development of paradigm models was stimulated by the criticism of 'orthodox' functionalism particularly in the work of Parsons, Buckley, Cohen, Gouldner and Allen.<sup>7</sup>

*The main substantive criticism is that, in emphasizing equilibrium, integration and interdependence, functionalism fails to take account of two basic elements of social action - change and conflict.*<sup>8</sup>

Parsons argues that 'change' is the dynamics of response to

external and internal factors – “movements in the central value system” of the system's environment and “tensions or strains in the system itself” respectively.<sup>9</sup> Parsons therefore modifies the older ‘static’ notion of equilibrium into a ‘dynamic’ one, but equilibrium remains the goal. He does not account for the idea that “change may be driven by conflict and contradiction rather than by the incorporation of expressions of dissent”.<sup>10</sup> He does not tell us

*why particular organizations, directed as they are towards certain goals, arise at particular times and in particular places.*<sup>11</sup>

or why “deviant organizations emerge and develop”.<sup>12</sup> And in his structural functionalism there is a failure to realize that “organizations can survive and even flourish without a common value-orientation among their members”.<sup>13</sup> The inevitability of stratification and the emphasis on “harmonious relations between system parts” have also been criticized by Buckley and Cohen as ignoring the operation of privilege and equal importance of “the superordinate and subordinate” in complex productive systems.<sup>14</sup>

The criticism of generic social systems theory continuous with that of functionalism extends the theme. Gouldner

*not only highlights variations in degrees of interdependence [between subsystems], but also the fact that some ... can survive even if separated from others.*<sup>15</sup>

Autonomy thus becomes a live issue as does the process of generating and reproducing an organization's goal.<sup>16</sup> And one conclusion of this line of thought is that neither an organization's goals nor its boundaries may be taken as given - that the generic systems approach fails to recognize that “there is no logic in [the] ...arbitrary division” of problem areas into independent systems.<sup>17</sup>

10. *ibid.*

11. *ibid.*

12. *ibid.* p.52.

13. *ibid.*

14. *ibid.* pp.52-3.

15. *ibid.* p.53.

16. *ibid.* p.54.

17. HASSARD attributes this to ALLEN, 1975.



Implicit in these criticisms of functionalism and generic social systems theory is the possibility of alternative models and methodologies that approach the whole problem of social organization from radically different perspectives.

Kuhn has suggested that science does not 'progress' as such but rather it suffers periodic intellectual upheavals in which one conceptual world view is replaced by another - the so-called 'paradigm shift'. The mapping of conceptual world views in terms of an abstract paradigmatic space is therefore something those social/organization theorists taking up Kuhn's idea have had to address.

### Paradigm Models

18. Jackson and Carter have suggested that arguably the Kuhnian 'normal' and 'revolutionary' sciences are both functional. I am not sure that this is the case, rather, I suggest that there is a kind of paramnesia involved in the Kuhnian scheme: in the new paradigm a substitute for the old is invented, one which gives the passing comfort of apparent continuity as well as an apparent confirmation of the superiority of the new, but, the original remains unrecovered: in the terms of the new paradigm it remains unrecoverable.

See: JACKSON, N. & P. CARTER "In Defence of Paradigm Incommensurability", School of Management Working Paper HUSM/PC/2, University of Hull.

19. See Appendix A.1 Type A.

20. GOULDNER, A. W. *The Coming Crisis of Western Sociology*. Heinemann, 1970. (See: HASSARD, 1993, p.57.)

Implicit in the notion of 'paradigm' is that the upheaval overturns and replaces a prior world view, that the outgoing and incoming world views are, at root, different in kind and in construction and that the new cannot be reduced to the old by any means - narrative or analytic.<sup>18</sup> Radical incommensurability immediately gives a clue as to the expected character of a paradigmatic space of ideology/philosophy: every dimension constructive of paradigmatic space must present a limited and differentiated range of possibilities.<sup>19</sup> Any other type of dimension will not add any defining possibility of paradigms, it will simply add depth to existing paradigmatic regions.

Gouldner, like most other contemporaries, focussed on methodologies.<sup>20</sup> As a defining dimension, however, the problem is that, although differentiated, the range of possibilities is not limited and some possibilities may be divided or merged almost at will. Although 'methodology' implies a theoretical base, the difference between one practice and another may be in its preferences as to technique,

procedure, or exposition rather than in their underlying conceptual world view.

Atkinson suggested 'micro' and 'macro' approaches to sociology as a defining dimension.<sup>21</sup> Unfortunately this leads to a false dichotomy particularly in modernism where the tensions between the individual and the collective, the private and the communal, generate its defining dialectic character - the 'movement'. Modernism is not the conflict of paradigms, rather it is the paradigm of conflict and as such it holds a specific if rather special place in any meta-physical scheme.

Friedrichs attempted a more adequate Kuhnian model in terms of producing a differentiated space.' He used two orders of two paradigms each.

*First-order paradigms referred to the images sociologists held of themselves ... Second-order paradigms concerned the image they held of the subject matter.*<sup>23</sup>

In first-order paradigms an opposed pair (or mutually opposed set) of defining characters is posited. To describe pre- and post-World War II sociologists he defined two paradigms: sociologist-as-priest "...committed to value-free analysis of social phenomena" and sociologist-as-prophet "...social critic and agent of social change." The problem with Friedrichs' scheme is that it only works as a continuous unfolding of second-order paradigms from within those of the first order. As it becomes clear that any scheme of 'orders' implies the possibility of commensuration, at least in the limited sense of a differentiation within, this is a structural fault that leads to the breakdown or corruption of the paradigm concept.

Denisoff et al 25 suggested

*five main paradigm rivals in sociology ...functionalism, conflict theory, micro-sociology, nominalism-voluntarism and social evolutionism.*<sup>26</sup>

21. ATKINSON, D. *Orthodox Consensus and Radical Alternative*. Heinemann, 1972. (see: HASSARD, 1993, p.57.)

22. FRIEDRICHS, R. A *Sociology of Sociology*. New York: Free Press, 1970. (See: HASSARD; 1993, pp.57-8.)

23. HASSARD, 1993, p.58

24. *ibid.*

25. DENISOFF, R. et al *Theories and Paradigms in Contemporary Sociology*. New York: Peacock, 1974. (See: HAS-SARD, 1993, p.59.)

26. HASSARD. 1993. p..59

27. EFFRAT, A. "Power to the Paradigms" in EFFRAT, A. (ed.) *Perspectives in Political Sociology*. New York: Bobbs-Merrill, 1973. (See: HASSARD, 1993, pp.59-60.)

28. BURRELL, Gibson. & Gareth MORGAN. *Sociological Paradigms and Organisational Analysis*. Heinemann Educational Books, 1979. The purpose in this book is broader than the title suggests. It provides a "way of seeing" the philosophical space associated with the various social theories and practices. And although I am not suggesting that "social theory/practice" is necessarily an adequate way of referring to design, there is certainly a large overlap and it seems reasonable to start with a view that at least promises to connect design with other theories and practices.

29. PINDER, C. & V BOURGEOIS. "Borrowing and the Effectiveness of Administrative Science". Working paper No. 848, University of British Columbia, 1982. quoted in HASSARD, 1993, pp.68.

30. Hassard misrepresents at least one of the criticisms leveled at Burrell and Morgan.

*Silverman's work on the action frame of reference could be better located within the interpretive paradigm, despite the arguments Burrell and Morgan make for the metatheoretical assumptions being characteristic of the subjectivist region of the functionalist paradigm.* [p.68. my emphasis]  
In Burrell and Morgan's scheme

Whilst unequivocal this scheme is reached via the 'trick' of re(de)fining the notion of paradigm in such a way as to upset its holistic character. As a "belief matrix" it becomes synthetic and, therefore, by implication composed of "paradigmatic assumptions" of a prior order: we return to the problem of Friedrichs' scheme.

Ultimately, if the problem of 'orders' is to be circumvented, an approach must be taken that plots 'philosophical' indices that are constitutive of a possibility and that resist further reduction. Even Effrat's resort to the two-dimensional, based on level of analysis (micro-macro) and substantive-component-emphasized (material, affective, interactional, and ideal/symbolic), breaks down at the point at which defined paradigmatic regions are seen to overlap and to be inexhaustive.<sup>27</sup>

The best attempt, that starts from what I would call a notion of 'irreducible philosophical indices', appears to be that of Burrell and Morgan.<sup>28</sup> Although criticized for misappropriating the philosophical question of ontology by taking it to imply beliefs about the nature of the existence of an external social world rather than "the study of existence in general, independent of any particular existing things",<sup>29</sup> Burrell and Morgan define a clear-cut scheme based on independent pairs of indices in which the value of paradigm as location is maximized.<sup>30</sup>

The Burrell and Morgan scheme is a two-dimensional 'map' of sociological paradigms. Each dimension derives from a set of metatheoretical assumptions. The first, the subjectivism-objectivism dimension, concerns assumptions about the nature of social science (Figure 2.4.1), the second, the regulation-radical change dimension, concerns assumptions about the nature of society (Figure 2.4.2.)

the functionalist paradigm is defined by an objectivist stance in the subjectivism-objectivism dimension. Although in their analysis Silverman's work, and the use of the action frame of reference in general, may address questions of the subjective they do so in a way that seeks objective knowledge about such things. The belief underlying the approach is that subjective orientations exist and can be studied, described, explained by an objective researcher. Burrell and Morgan actually place Silverman and the action frame of reference at the "subjective boundary of the paradigm" [p.122.] for the above reasons. The position of the Hermeneutic tradition at the objective boundary of the interpretive paradigm and that of the action frame of reference at the subjective boundary of the functionalist paradigm does not in any way conflate the two perspectives: they remain subjectivist and objectivist respectively and, therefore, part of incommensurable paradigms whose only commonality is that of a regulatory orientation.

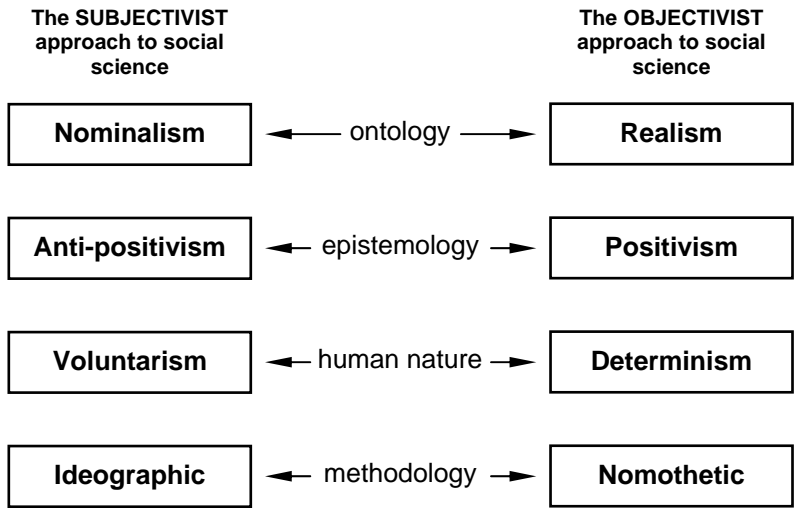


Figure 2.4.1  
 "A scheme for analysing assumptions about the nature of social science." From Burrell and Morgan, 1979, p.3.

The sociology of REGULATION is concerned with	The sociology of RADICAL CHANGE is concerned with
(a) The status quo	(a) Radical change
(b) Social order	(b) Structural conflict
(c) Consensus*	(c) Modes of domination
(d) Social integration and cohesion	(d) Contradiction
(e) Solidarity	(e) Emancipation
(f) Need satisfaction†	(f) Deprivation
(g) Actuality	(g) Potentiality

Figure 2.4.2  
 Table showing the seven elements that construct "ideal-typical formulations" of the notions of 'regulation' and 'radical change'. From Burrell and Morgan, 1979, p.18. ( \* † Both of these elements have qualifying notes in the original.)<sup>31</sup>

31. Notes  
 \* By 'consensus' we mean voluntary and 'spontaneous' agreement of opinion.  
 † The term 'need satisfaction' is used to refer to the focus upon satisfaction of individual or system needs. The sociology of regulation tends to presume that various social characteristics can be explained in relation to these needs...  
 BURRELL & MORGAN, 1979, p.18.

In so far as museum • design • organization is the object and the arena of a praxis which is socially defined - it is socially constructed, it forms a system which is in large part social, it relates a particular experience to the social, its motivation is visionary in respect of social change - such a paradigmatic scheme applies directly. However, there is the broader implication that any form of praxis reveals its location in such a space simply by expressing its underlying metatheoretical assumptions. Furthermore,

there is the implication that any form of praxis that is open to the variety of metatheoretical assumptions constructs an identical paradigmatic space. In the museum design organization context specific practices, such as collection documentation and conservation, tend to follow a conventional set of theoretical beliefs and, therefore, to occupy relatively stable locations in paradigmatic space. All museum practice used to be of this sort - a museography bound into a classically functionalist paradigm - and to develop largely on the basis of this received wisdom.

### Received Wisdoms

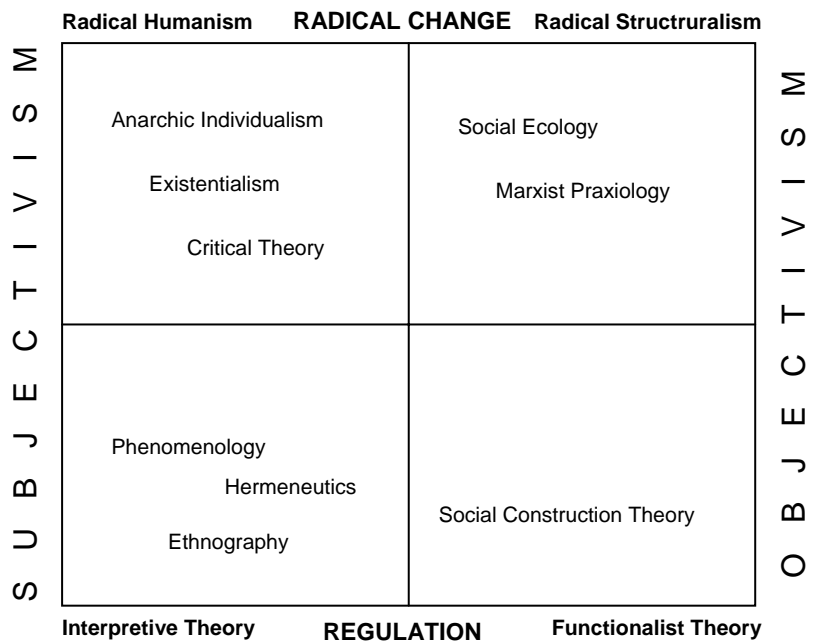
Once upon a time it would have been relatively straightforward to frame a theoretical project of this sort by rationalizing in the area of philosophical discourse by which the discipline was contingently defined. This possibility has been effectively eliminated by a combination of (1) the development of post-philosophical discourses, (2) the ambiguous nature of the design discipline, and (3) the late development of design discourses and the new museology which are both immediately conditioned by postmodern thought. Most practices - design amongst them - shift their theoretical ground depending upon the individual practitioner, the specific organizational context, the influence of the wider environment and/or on the dynamics of specific projects and social interactions.

In the absence of any safe-haven "Philosophy" this project thus becomes substantially philosophical.<sup>32</sup> This is not to say that there is nothing to be learned by a study of Philosophy: knowing where one is coming from is part of knowing that one is going somewhere. So a map is useful and, for the reasons outlined above, the one I have used is that developed by Burrell and Morgan.<sup>33</sup> (Figure 2.4.3.)

32. RORTY, Richard. [1982] *Consequences of Pragmatism*. Harvester Wheatsheaf, 1991. p.xiv-xv.

... "philosophy" can mean simply what Sellars calls "an attempt to see how things, in the broadest possible sense of the term, hang together, in the broadest possible sense of the term"... But the word can also denote something more specialized, and very dubious indeed ... it can mean following Plato's and Kant's lead, asking questions about the nature of certain normative notions (e.g., "truth," "rationality," "goodness") in the hope of better obeying such norms. I shall capitalize the term "philosophy" when used in this second sense.

33. BURRELL & MORGAN, 1979. pp.1-37.



34. RORTY, Richard.  
*Contingency, Irony, and Solidarity*. Cambridge University Press, 1989. In considering the contingency of language Rorty suggests, in good pragmatist form, that philosophy should involve asking questions of the type:

“Does our use of these words get in the way of our use of those other words?” This is a question about whether our use of tools is inefficient, not a question about whether our beliefs are contradictory.

35. Thales of Miletus (alive in 585BC) is credited as “The first Greek enquirer into the nature of things as a whole.” FLEW, Antony. (Consultant ed.) *A Dictionary of Philosophy*. Pan Books, 1979. p.351. Although, in the *Theogony* (written about 700BC) Hesiod prefigures Thales efforts in one respect at least, “the gods and the universe were described by him as a matter of private interest.” FRANKFORT, Henri. et al. *Before Philosophy*. (First published as *The Intellectual Adventure of Ancient Man*. University of Chicago, 1946.) Pelican, 1949. pp.249-50.

Figure 2.4.3  
BURRELL & MORGAN's map of sociological paradigms.

However, having found ones way around, a map becomes essentially redundant unless one’s purpose is, not simply to explore Philosophy but, to build something - to do some philosophy - then what one needs is a tool box.<sup>34</sup> Before looking at the contents of the tool box I intend to use, it is necessary first to comment on how a multiplication of discourses reflects a postmodern condition in design, in science and, in general, in knowledge.

A Plurality of Discourses

Since the earliest Greek philosophers, the philosophical enterprise has concerned itself with determining the truth of beliefs about the nature of the universe and of the world of human affairs.<sup>35</sup> This has generated the various discourses of ethics, politics, metaphysics, epistemology, ontology, and logic, and latterly of language itself. For each discourse there is a [speech] context in which it makes

some sense, and by implication, other [speech] contexts in which it makes little sense. For example, we can use a Newtonian understanding of physics to help us cope with almost all everyday occurrences of material interactions. The local human scale of observable phenomena - the ones that we are able, or feel able, to mechanically interfere with or control - all appear to coincide with the predictions of Newtonian physics. However, phenomena related to the subatomic and the near-light-speed, which are beyond our powers of direct observation, fail to follow the predictions of Newtonian mechanics. To help us to cope with these we must use a different understanding - Einsteinian relativity. To any snooker player, who cares to study the matter, Newton provides good explanation of how the balls will react and Einstein, with his completely counter-intuitive explanations, just confuses the issues. Equally, to any astronomer Einstein provides good predictions for time-space phenomena which Newton, with his mechanical view of the universe, makes look impossible.

There are many forms of received wisdom. Just as within Science there are distinct discourses that appear to be at variance with, or operate on different levels to, each other, in Philosophy also there is a multiplicity of contradictory discourses that nevertheless help us to cope in different ways and in different contexts. It is uncommon to make use of more than a few such discourses which, in Philosophy, are normally worked through to achieve, as far as is possible, consistency and coherence. However, we are all prone to making strong claims to truth for some bundles of these discourses, and as we have seen, this can be a big mistake. Not only can contradictory discourses be equally effective in different contexts, but some (some would say, ultimately all) discourses contain within them irreducible contradictions or paradoxes that make their use

in any context ironic, contingent and most likely collusive.<sup>36</sup> In the case of linguistic philosophy, which is at the level of a discourse on discourses, the problem of reflexivity - having to apply its own methods or rules of investigation to itself - quickly results in a disintegration of all universal foundations. Put most simply, statements of the form “all generalizations are false” abound.<sup>37</sup> For example:

*Previous arguments asserting the context-dependent character of our beliefs or our observations are no longer so threatening since the theory of that context-dependence turns out to be context-free. And if that theory is context-free then others can be also.*<sup>38</sup>

But, it turns out that our beliefs and our observations are context dependent after all. And we can also see that, in pronouncing on different discourses, the difference between “it works because it’s true” and “it’s true because it works” is purely conventional.<sup>39</sup> The rule seems to be: the weaker the claim to truth, the less problem we have in accepting each of these studies as viable and valuable - the stronger the claim to truth the greater our difficulties become, and of course, the question of whether this statement is itself making a strong or a weak claim to truth stands as further evidence of unavoidable reflexivity.

Every systematic knowledge has been built-up only to be partially, sometimes largely, demolished by subsequent and often incommensurable systematic knowledges. Although Newton’s laws may not be the latest word in physics, they are, as we have seen, still useful. We live amongst the ruins of the past and the half-built edifices of the future, and not contentedly within the houses of the present. Our reality is a landscape full of variety and change. We do not, never have and almost certainly never will, live in one single and perfect house. Which is the same as saying that we are not, never have been and

36. RORTY, 1989, op cit.

37. LONGMAN DICTIONARY OF THE ENGLISH LANGUAGE, Longman, 1984. p.1064. See: Paradox 2b.

38. LAWSON, Hilary. *Reflexivity: The Post-modern Predicament*. London: Hutchinson, 1985. p.20.

39. RORTY, [1982] p.xxix.



probably never will be, one single and perfect kind of 'Being in the world'.<sup>40</sup> The rationalist-empiricist and the relativist-idealist worlds turn together, recalling the Heraclitian thesis that the universe is an intelligible whole which is a perpetual flux of change marked by the continuous transition of everything into its opposite.<sup>41</sup>

Take, for example, Jonathan Miller's conclusion from the end of his television series *Madness*, where he seems to concur with the view that though there have been, and should continue to be, attempts to understand and deal with the human condition, the world we live in is a many faceted place with no certain true reflection of our own, or of any other, nature in any of its mirror-surfaces whether they be called philosophy, science, art, religion, morals or intuition. He also entreats us to act as though this multi-valent uncertainty is likely to remain the way things are; we should act with as full a knowledge as we can but also always in the knowledge that we have no fundamental knowledge at all.

40. HEIDEGGER, Martin. *Being and Time*. Trans. John Macquarrie & Edward Robinson. Oxford: Basil Blackwell, 1962. According to Heidegger existence is a matter which can only be understood through phenomenological investigation of our participation and involvement in the world, and the goal of such understanding is the realization of an 'authentic' self, a self characterized by identity, autonomy, care and openness to future possibility.

41. FRANKFORT, Henri. op. cit. pp.257-8.

42. MILLER, Jonathan. *Madness*, final part. BBC Television, 1991.

43. POPKIN, Richard H. & Avrum Stroll. *Philosophy Made Simple*. W. H. Allan, 1969. p.xiv.

*Meanwhile, and by meanwhile I mean forever, being human, what ever that is, is something we have to survive, as there is no prospect of rescue, and since madness and misery seem to be an inescapable 'risk' of having our particular sort of constitution, the measures which we take to deal with it had better take account of the fact that we don't, and perhaps never will, know exactly what sort of thing we are.*<sup>42</sup>

Given the 2500-year time span of the philosophical enterprise and the vast space of knowledges about "the nature of the universe and of the world of human affairs" it has opened up,<sup>43</sup> it may be surprising to find that certain rather important human traits have not been much of a concern to philosophers and therefore that certain practices have a poor theoretical literature.

## The Absence of a Discourse

Few philosophers have mentioned design.<sup>44</sup> Creative engagement with the material of the world in the pursuit of desirable change is a topic which has not interested many, other than in respect of an account of practical rationality and value judgement.<sup>45</sup> Philosophical interest in art has a history which is as long as that of philosophy itself. But even here the aspects deemed to be proper to philosophical investigation, with rare exceptions, have not included all of those known in practice. Philosophers have devoted great efforts to the aesthetic dimension of artistic endeavour, and to that of practical reasoning, but little or none to the crucial dimension of practical creative activity. In considering the subject's thinking *about* creative activity, philosophers have tended, thereby, to limit themselves to fields in which language dominates. This has been, if you like, the criterion by which Philosophy has always judged itself; Philosophy uses the spoken and written word exclusively, even if the abstract symbolic language of logic is imposed upon some kinds of analytic philosophizing, and therefore can only effectively deal with what falls within the scope of such language.<sup>46</sup> It is no surprise, therefore, that, in not being obviously dominated by linguistic operations, practical creative activity has been neglected by Philosophy. To be aggressive about this, one could suggest that the ideology of Philosophy is to subsume all understanding under linguistic formulations. And therefore that Philosophy presumes that what is not so formulated cannot be understood.

This negativity might seem to be the worst possible finding in a thesis that is itself borne out of a substantially philosophical project. However, the limitations of the past are as much to do with historical contingencies - social

44. Clearly I am not including that quite different idea of Design invoked in the teleological argument for the existence of God, an idea which does a disservice to the study of design by focussing our attention on the evidence appearances and end products provide of "contrivance" and fixed patterns of order.

45. A great number of definitions of design have been proposed. The more encompassing ones are generally process oriented and refer to a fundamental human capability, e.g.:

*Everyone designs who devises courses of action aimed at changing existing situations into preferred ones.* [Herbert Simon quoted in MARGOLIN, Victor. *Design Discourse: History – Theory – Criticism*. University of Chicago Press, 1989. p.3.]

46. The exceptions are works such as: HARRISON, Andrew. *Making & Thinking: A Study of Intelligent Activities*. Harvester Press, 1978. And; EHREN-ZWEIG, Anton. *The Hidden Order of Art*. Weidenfeld & Nicolson, 1967.

norms and professional taboos or incapacities - as with any presupposed boundaries in philosophy *per se*. And it is one of my contentions that the current condition - historically, socially and professionally - of the milieu in which individuals, such as myself, find themselves is one in which philosophy is suitably transformed.<sup>47</sup>

The philosophy which comes after Philosophy has its roots in the work of those philosophers who in the late 19th and early 20th centuries had the most thoroughgoing doubts and engaged most earnestly with the nihilistic tendency towards Philosophy - Nietzsche and Wittgenstein.

In the sense that Nietzsche “conceives reality as a kind of ineffable flux that can be trapped within the categorical net of language only at the expense of fatal distortion” he points to the nagging doubts about the functional aspects of human communicativity with which Wittgenstein so perilously struggled.<sup>48</sup> Wittgenstein admits in the *Tractatus*, the major work of his early career, that the propositions upon which it is based have him

*...trying to say what can only be shown, to stand outside language and the world and describe the relationship between them ... Hence what he says is strictly 'nonsensical' ...*<sup>49</sup>

47. BAYNES, Kenneth., James Bohman & Thomas McCarthy. (eds.) *After Philosophy: End or Transformation?* MIT Press, 1987.

48. FLEW, Antony. (Consultant ed.) *A Dictionary of Philosophy*. Pan Books, 1979. p.249.

49. *ibid.* pp.375-6.

50. ADORNO, Theodor. [1966] *Negative Dialectics*. Trans. E. B. Ashton. London: Routledge & Kegan Paul, 1973. p.4.

Where interdisciplinary academics and practitioners, amongst whom I must include myself, now find themselves is thus in the midst of an intellectual upheaval, a burgeoning field of world views, a plurality of engaged ventures in which theory and practice are deliberately and variously mixed, fused, or collapsed into each other. As such we find ourselves competing, or struggling not to compete, in a consumerist environment in which information and knowledges are the most volatile and valuable of commodities. In Theodor Adorno's words: “No theory today escapes the marketplace”.<sup>50</sup> We must also reconsider what has been

51. The pattern of art and design education in Britain had been dominated by the independent Regional Colleges of Art originally founded during the late-19th and early-20th centuries. In the 1960s these had tended to amalgamate with independent regional colleges, associated with other areas of vocational training, to form Colleges of Higher Education or, if broad enough in their resulting curricula and large enough in student numbers, Polytechnics. Until the Higher Education Act of 1992 Polytechnics and Colleges of Higher Education remained the responsibility of Local Education Authorities. After incorporation they found themselves on the same legal and financial footing as the Universities and the Government soon agreed, subject to their meeting certain criteria including proportion of degree-level work and full-time student numbers, to allow those institutions that wished to do so to change their names to include the University title.

52. For example:

AGNEW, Kenneth. "The Spitfire: Legend or History? An Argument for a New Research Culture in Design". *Journal of Design History*, 6:2, pp.121-30.  
FRAYLING, C. "Artefacts Rather than Arty Facts". *The Times Higher Education Supplement*, 10 May 1994.

and papers by BILLET, E H., CLIPSON, C., DAVIES COOPER, R., and PRESS, M. in *Co-Design*, 01-02-03:95.

53. In Fine Art, a subject represented also in a few of the older universities, the principle had been long established that the

said about language both in philosophy and in practical arenas to see how some, previously unperceived, opportunity has arisen to account for practices such as design.

In Britain, the former Polytechnics adopted the university title in 1993 and, as a result, a largely separate academic tradition in the field of art and design was suddenly brought into the mainstream of higher education.<sup>51</sup> This has had immediate consequences, particularly in the area of research. Some research outcomes in art and design are similar in format and purpose to those of other areas of academic endeavour. However, most practitioners would argue that the most important ones are quite distinctive.<sup>52</sup> It comes down to this question of language - the domination of academic endeavour by the requirement for exposition, discourse, and critical thought to be expressed in words. In the past, in research-oriented art and design practice exposition, discourse, and critical thought have been expressed primarily in practical works, that is, the substance of the research has been embodied in the products of the creative process, even if supported by spoken and/or written adthesis.<sup>53</sup> In the postmodern doubts and deconstructivist tendencies that have found expression in recent art and design, we have evidence that broader interdisciplinary approaches to practice are emerging.<sup>54</sup> They borrow ideas from an ever wider range of disciplines in the quest to develop effective design and to advance persuasive rationale.

Whereas in high modernism it was sufficient to express the relatively coherent ideas of minimal form, pure function, economy of materials, absence of decoration, technical innovation, universal appeal, etc. in postmodernism expression involves layering some or all of these with incommensurable ideas such as complexity, opacity, contradiction, historical reference, fashion image, surplus

work of staff displayed and catalogued in public exhibitions, particularly if accompanied by an exposition of the artist's ideas in essay form, counted as a legitimate forwarding of knowledge. Architecture also has a long tradition of 'paper architecture' - projects executed primarily to explore problems of philosophy, technique or visual language, and published or exhibited rather than built. In other areas of design neither precedent was well established. Instead, implemented designs, properly documented, were deemed to count as research. This seems acceptable as long as the product demonstrably communicates something original. However, the worry, particularly amongst those academic researchers that 'publish', is that many designed objects, like most museum objects, communicate very little without expert interpretation.

54. There are a few examples of practicing designers and architects who have always had an ambivalent relationship to professional norms in respect of the place of research in practice. Ettore Sottsass has made a career out of departing from the requirement for normatively grounded rationale. Instead, he offers his work as a designer as 'a series of efforts in research' which, with the help of his writer partner, Barbara Raddicci, generate their own peculiarly innovative and persuasive text.

Frank Duffy, in contrast, stepped out of his professional milieu as an architect to complete a social science doctorate only to assimilate and subsume a continuing research practice wholly within the frame of pro-

narrative, individuality and whim.<sup>55</sup> As a consequence rationale has become idiosyncratic, layered and multiple - tribal babble, marketing ploy, cultural play, political critique, material psycho-narrative, etc. - and is therefore as likely to involve a vocabulary drawn from anthropology as one drawn from economics, aesthetics, critical theory, ecology, or psychotherapy. Design discourse therefore finds itself not much further on than a beginning just at the time when more established discourses have reached a crisis of identity, foundations, and purpose. It is at this point that the design theorist enters the "market place" - a moment which is both opportune and inauspicious.

### Entering the Market Place

Within the project of philosophy certain paradigmatic dimensions are outlined by Burrell and Morgan and summarised in their map of sociological paradigms. This study begins with certain inclinations - nominalist, anti-positivist, voluntarist and ideographic - which need explanation. Later, the debate will be opened up and the need for clear cut paradigmatic posturing questioned; a process which reflects the end-of-philosophy debates represented by post-modernist thought and is pointed towards resolution by efforts to rebuild the project of knowledge by, for example, reconstituting Science and elaborating ecological norms.<sup>56</sup> The precedents to which the study turns for critical reference and to borrow can be seen, using a developed version of Burrell & Morgan's map, to subjoin the space of postmodernism. Although one should note that, in effect, this 'zone' only exists in the sense that, as the classical dualities - objectivism-v-relativism and radical-change-v-regulation - are transcended, its internal divisions are dissolved. The theoretical standpoint developed in this

fessional architectural knowledge and practice.

The Centre for Research in Art and Design (CRiAD) at the

thesis, if it has to be named, is **Irony Activism** which works within the reconstituted paradigm of Design (Figure 2.4.4.)

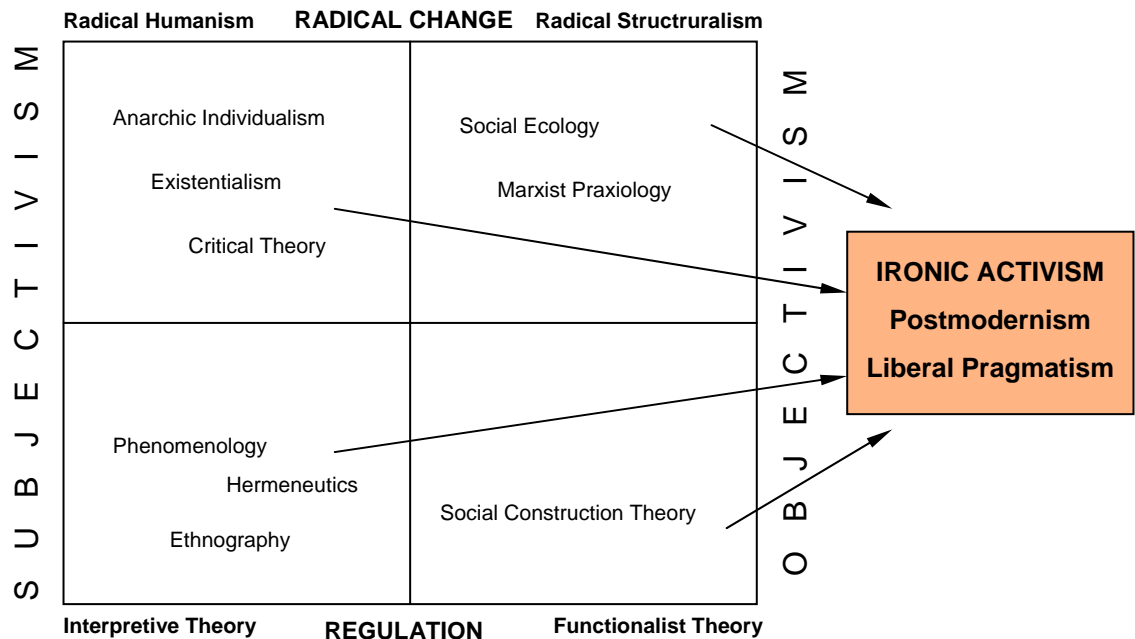


Figure 2.4.4

The space of Irony Activism unfolded from BURRELL & MORGAN's map of sociological paradigms.

Grays School of Art (The Robert Gordon University) in 1996 boasts a sizable research community which includes graphic designers Iain Burt and Heather Delday both of whom conduct and present their research as design practitioners.

55. Charles Jencks is responsible for the idea that postmodernism in architecture can be recognized by its:

*double coding: the combination of Modern techniques and something else (usually traditional building) in order for architecture to communicate with the public and a concerned minority, usually other architects.*

[JENCKS, Charles. *What is Post-Modernism?* Academy Editions, 1986. p.14.]

In the ontological debate (as framed by Burrell and Morgan) I am naturally inclined towards the nominalist position. The structuring of reality is essentially a human process, dependent upon language in the broad sense.<sup>57</sup> The nominalist position within Philosophy is ultimately inadequate, not because the idea of nominalism is weak but because the philosophical tradition privileges the 'word' above other modes in any analysis. The argument is therefore elaborated that the useful concepts in language are those that encompass aspects normally differentiated from philosophy. In short, to the categories of 'name', 'concept' and 'label' must be added 'artefact' and 'act' if a workable theory of reality construction is to be generated, and the question of whether or not to continue to refer to the position as a nominalist one must be addressed.

"Layering" is specifically mentioned by Nigel Coates in his explanation of Narrative Architecture.

*The practice of architecture needs to drop its production-line thinking - to adopt layering and random access. ... Narrative architecture never obliterates the existing world, but exploits and overlays it.* [COATES, Nigel. "Street Signs" in THACKARA, John. (ed.) *Design After Modernism*. Thames & Hudson, 1988. p.99 & 103.]

56. The notion of reconstituting Science is a venture which has been under way since Einstein's theory of relativity effectively erased the objective view point in physical systems: Heisenberg's uncertainty principle and the proposition of distance effects incorporated into recent multidimensional theories are specific examples of the fallout from this exploding of the sovereign subject in classical science. *...the scientist cannot play the role of a detached objective observer, but becomes involved in the world he observes to the extent that he influences the properties of the observed objects.* [CAPRA, Fritjof. [1975] *The Tao of Physics*. revised edition, Fontana Paperbacks, 1983. p.153.]

Minimally, therefore, we must expect a reconstituted Science to be participatory and to make only weak claims to truth. And, accepting the deep level of interrelation and interactivity between micro- and macro- worlds, we must expect that we will be able to propose useful ecological principles, at least as useful as those explaining the uncertainty of subatomic events. Bohr expressed it thus: *Physics*

My natural inclination in the epistemological debate is towards an anti-positivist position. The idea of needing to occupy "the frame of reference of the participant in action" in order to "understand", represents the basic tenet.<sup>58</sup> However, the objective-subjective dichotomy with which this and the contrapuntal positivist notion of seeking the power to "explain and predict ... regularities and causal relationships" in a differentiated world, are normally associated, is ultimately flawed and throws a bad light on the anti-positivist position within philosophy.<sup>59</sup> The reflexivity of the human condition most clearly illustrates the weakness of the linguistic division of the objective from the subjective. Such reliance on language represents an anxiety that ought to be, and can be, countered. By admitting "actions" and "productions" into the argument there is an opportunity to reverse the withdrawal from material involvement, that an overemphasis on the power of language often represents, with a reaffirmation of the larger human potential for *becoming* knowledgeable and competent.<sup>60</sup> Whether or not, after this, one should continue to call the position "anti-positivist" again is a question to be addressed.

Almost thematic in the notion of design is that the individual is free to counteract environmental signs and motions.<sup>61</sup> In the human nature debate, therefore, I have a natural inclination towards the voluntarist position. However, the separation of subject and environment, figure and ground, upon which the voluntarist-determinist dichotomy is founded must be seriously questioned in the radically decentred and therefore de-differentiated condition postmodern theory describes.<sup>62</sup> In the ecological sense no particular type of actor in an open system can be privileged above any other.<sup>63</sup> Global behaviour displays its image-form, if at all, in a syncretism and betrays its

is not about how the world is, it is about what we can say about the world. [DAVIES, Paul & John Gribbin. [1991] *The Matter Myth: Beyond Chaos and Complexity*. Penguin, 1992. p.21.]

57. If language can be thought of as the defining human trait, this implies an underlying humanism. The endlessly renewable language games can only serve human ends. Even a concern for the radically 'other' or the 'undifferentiated whole' or the 'disembodied essence' is nonetheless a concern expressed in language and therefore, in general terms, humanistic. Clearly, in this formulation, humanism is being somewhat dissociated from its past, but this can be justified, though only weakly, in the sense that postmodern doubts throw us back on ourselves - if there are no universal foundations to which we can appeal, we only have the option of continuing conversations. Bernstein's defence of his notion of a "non-foundational pragmatic humanism" is important here, as are Rorty's notions of "projects of self creation", "imaginative identification", and "free and open encounters". All that is said by postmodernist critics against this humanism, that is the life blood of modernism, is worthy stuff, but, in the end, it does not clear the world of humanism per se only of a chimera. To be human is the only foundation upon which we can build. Whatever razor edges we use to separate off a previous way of thinking, of talking, of being, from what we believe the next stage will be, it cannot separate off the "being" itself even though it may change its ways. What

possibilities in a synergy. The irony of the situation is that, even in the partial systems we may care to visualize, we can never escape our own inclusion in the pattern of things. As participant the dimension of speed becomes crucial.<sup>64</sup> Change exerts a reciprocal effect which increases with time. Design is the acceleration of change and therefore the multiplication of perceived effects. Every intervention creates the opportunities for, perhaps the necessity of, increasingly widespread and intensive interventions. Furthermore, this multiplication takes effect at the instant of intervention not at its forever-deferred ending, and therefore there is no recognizable chain reaction, no predictable pattern of event explosion, but rather a interpenetrative force field in which the world (including the designer) is forming.<sup>65</sup> The reflexivity of praxis, which implies a determining force of relations in the dimension of speed, is thus as inescapable as is the undecidable nature of the system and whether or not one can continue to refer to the position as voluntarist is questionable.

The methodological debate presents problems peculiar to design. Although, to accept Burrell and Morgan's terms, I am naturally inclined towards an ideographic approach. In design this hardly does justice to the divergent possibilities this represents. Generally there is an interventionist conception of methodology in design, the goal of the design process being, not merely to study and to understand a situation, but, even when these remain incomplete (they normally do), to change things for the better by replacing or modifying specific objects/elements/subsystems within the practical context to which the designer has been introduced.<sup>66</sup> However, this instrumental description, although common, is not universal, and furthermore, almost every clause in its composition is, in practice, open to modifying, even counteracting, qualification. The design process only



postmodernism really signifies is a radical humanism. No world that we can think, say or be in can be anything other than a humanistic one for the act of thinking-saying-being creates the only world we can know, and, no matter how we try to change our ways, the new will always be human at heart. BERNSTEIN, Richard J. *The New Constellation*. Polity Press, 1991. and RORTY, 1989, pp.118, 93 & 68.

58. BURRELL & MORGAN, 1979, p.5.

59. *ibid*.

60. See: BERNSTEIN, 1991. The ethical-political horizons that are of concern to Bernstein mark the reentry of praxis into discourse via the *Stimmung* of "modernity/postmodernity". In their later writings he sees Heidegger, Derrida, Foucault and Rorty beginning to ...*gravitate more and more to confronting the ethical political consequences of their own thinking*. [p.11.]

61. See: JONES, J. Christopher. *Design Methods: Seeds of Human Futures*. Revised Ed. John Wiley & Sons, 1981. p.3-4. MAYALL, W. H. *Principles in Design*. Design Council, 1979. p.9. POTTER, Norman. *What is a Designer: things.places.messages*. Revised Ed. Hyphen Press, 1980. p.13.

Jones quotes many of the better known definitions of design proposed in the 1960s including:

- *Finding the right physical components of a physical system.*
- *A goal-directed problem-solving activity.*

makes sense within the context of a notion of 'professional practice', a set of recognized protocols and techniques which although not 'scientific', in the sense of according with the procedures of testing hypotheses by quantitative techniques and data analysis, are rigorous in terms of procedure, administration, and documentary production, and comply with the notion of set rules as the guarantor of success. At the same time, the professional practice of design only makes sense in the context of a design process which is contingent, variable, unpredictable in its detailed content and dynamics, and therefore highly idiosyncratic. The ability to work with an incomplete understanding of the situation and too little time for the exercise of practical rationality alone, are fundamental characteristics of the design process. It is its moments of irrationality that make it reasonable. If design were not a social activity one could propose to reconcile this apparent division by recourse to Rorty's notion that between the personal and social, the ethical and the political, one does not require a "synthesis" merely an "accommodation".<sup>67</sup> However, it is not that simple. In the vast proportion of situations, the design process encompasses a collaborative creativity, and professional practice includes the dimension of existential experience - the moment about which action depends upon inalienable individual conscience and responsibility. Given the necessity to be both involved in the materiality of the practical situation and its social context, and to be independent of its thought-world and professionally detached, whether or not one can continue to refer to the theoretical position on methodology as ideographic is questionable. The possibility of clear-cut allegiance, as in all of the key debates that define the subjective-objective dimension, is at least compromised, but I believe the problem is deeper than that.

• *Decision making, in the face of uncertainty, with high penalties for error.*

• *The imaginative jump from present facts to future possibilities.*

• *A creative activity - it involves bringing into being something new and useful that has not existed previously.*

Jones offered his own "simple but universal definition" of design:

• *to initiate change in man-made things*

Although, several years earlier, he had offered a definition which openly questioned the need to have a closed definition:

• *The performing of a very complicated act of faith*

The first sentence of Mayall's chapter 1 reads:

• *Design conceives and defines all the means we employ to satisfy our many and increasingly intricate needs.*

In explaining the focus of his book, Potter contributes:

• *to give form and order to the amenities of life, whether in the context of manufacture, or of place and occasion.*

62. BANNET, Eve Tavor. *Structural-ism and the Logic of Dissent*. Macmillan, 1989. Barthes idea of the *système-tiques*, which are "open, infinite, uncentred, disseminated, performative and capable of endless permutations", is useful here, with it he suggests that *society and human life could be like his books ...which fragment the subject into decentred elements which can be contrasted, combined and varied in innumerable ways.* [pp.82-3.]

The contradiction with which this deals is between Foucault's suggestion that the only way out of the division between subject

By starting with the Burrell and Morgan model the problems posed by recent philosophical debate can be clearly visualized. The boundaries of such opposed terms as: 'nominalism' and 'realism'; 'anti-positivism' and 'positivism'; 'voluntarism' and 'determinism'; and 'ideographic' and 'nomothetic', have become blurred in a metaphysics of the incommensurable and fragmentary, a meta-relativism which is self-reflexive, self-contradictory, irreducibly paradoxical, at least in Philosophical terms, and is the real substance of post-Philosophical philosophy.

and environment, which is *...a result of man making his cogito the condition and himself the centre of all things ... is to erase man, to turn the page and to start thinking from somewhere else,* [p.160.]

and the insight that there is a radical humanism from which we cannot escape - the non-foundational pragmatic in Bernstein and the engaged liberal ironist in Rorty.

63. The idea of the "actor network" is useful here, *... it is composed of a series of heterogeneous elements, animate and inanimate, that have been linked one to another for a certain period of time ... But the actor network should not ... be confused with a network linking in some predictable fashion elements that are perfectly well defined and stable, for the entities it is composed of, whether natural or social, could at any moment redefine their identity and mutual relationships in some new way and bring new elements into the network.*

CALLON, Michel. "Society in

the Making: The Study of Technology as a Tool for Sociological Analysis" in BIJKER, Weibe E., Thomas P. Hughes & Trevor Pinch. (eds.) *The Social Construction of Technological Systems*. MIT Press, 1987. p.93.

64. VIRILIO, Paul. (1984) *Lost Dimension*. Trans. Daniel Moshenberg. New York: Semiotext(e), 1991.

Virilio proposes that:

*The crisis of physical dimensions, just as the crisis of measurement, is tied up with the crisis of determinism and affects today the whole ensemble of representations of the world* [pp.50-1.] not only at the micro-level of the subatomic but at every macro-level. He uses Mandelbrot's explanation of the problem of measuring the coast of Brittany to illustrate the point:

*a dimension is a matter of the degree of resolution, and ... the numerical result depends on the relations between the object and the observer,* [p.55.]

but more than this, what is missing in this is

*the temporal aspect of all acts of.*

*measuring and all acts of sighting ... The figures of the man, the mouse, and the fly who survey the Breton coastline are only the anthropomorphic and zoomorphic aspects of a specific speed of displacement.* [p.57.]

Slow down the act of measuring and the distance tends to infinity, speed it up and it tends to zero.

65. "Force-field": Bernstein (1991, p.9.) appropriates Adorno's metaphor which Martin Jay defines as a *relational interplay of attractions and aversions that constitute the dynamic transmutational structure of a complex phenomenon.*

JAY, Martin. Adorno. Fontana, 1984. p.14.

66. See 29. above. The third definition of design quoted from Jones (1981), and also the second quoted of Jones' own definitions.

67. RORTY, 1989, p.68..

### 3.0 Locations and Discourse

#### Ephemeral Presences

Four generic spatialities have been explored in the previous chapter - physical, social, documentary and paradigmatic. The possibilities for modelling the space of museum•design•organization have been indicated in critical perspective and it is now the task of the project to move from the generic notion of space to the generated notions of location and discourse. Each of the engaged elements that make up the museum•design•organization complex has a history, an ethnography, and a genealogy or archaeology. In this chapter an attempt will be made to uncover each element taking the last first, the broad before the narrow, the abstract before the concrete, in the hope that their loci in the physical, social, documentary and paradigmatic may be recovered. The seeds of despair in this little venture are sown at the beginning: the organizational question itself is one of doubt about the independence of any 'component' element constitutive of the multidimensional and, therefore, interminably interactive, complex. As none of the elements exists alone, the objects of location and discourse immediately point to their interrelations, but, and this is important, consideration of the differences or interfaces, the boundaries between, must be deferred long enough for some presence to be generated however unstable and ephemeral it may later prove to be.

### 3.1 Organization

#### Models in Analysis and Design

In *Images of Organization* Gareth Morgan presents a series of metaphors upon which can be built powerful mythic explanations of organization. The model which Morgan proposes takes the form of a series of abstract images which have a dual purpose - as tools in analysis and as heuristic devices or templates in design. The model is not arrived at from any general theoretical approach to the idea of organization, rather, it starts from the specific connection between organization and the kinds of work situations in which “business executives, public administrators, organizational consultants, politicians or trade unionists” find themselves.<sup>1</sup> The central (privileged) role of the human actor in such a view of organization is explicit: throughout, Morgan uses the language of human action and relations, even commenting that when gripped by the machine metaphor of organizations “we often attempt to organize and manage them in a mechanistic way, forcing their human qualities into a background role”.<sup>2</sup> The philosophical problems that this centred subject gives rise to are now well known and cannot be ignored. In the section above on Philosophy, I have argued that although to be human, in all that we do and say, is existentially inescapable, the position that the human occupies in the world can no longer be regarded as privileged. So that, although we may speak of socially constructed reality, what is constructed encompasses more than the social.<sup>3</sup> It extends to the whole of perception, both the rational and the natural. It is necessary, therefore, to take a step back from Morgan's constellation of metaphors and the powerful mythic explanations that they are able to generate and look to

1. MORGAN, Gareth. *Images of Organization*. Sage, 1986. p.11.

2. *ibid.* p.13.

In this the social spatiality and the ‘humanistic’ motivation are paramount even when realized through a fragmentation of the ‘man’, a suppression of freedom, and a glorification of process and function.

3. BERGER, Peter. & Thomas Luckmann. *The Social Construction of Reality*. Penguin, 1967.

other more general notions of organization. We must dispense with the idea that organization is limited to a particular realm, as determined by a past or present discourse, whether of Philosophy, museology, anthropology, history, or natural science, and instead we must look to generic concepts in organization and systems such as 'boundary', 'difference' and 'space'.

## Boundary

Cooper notes that the concept of 'boundary' receives scant attention even in General Systems Theory, "a discipline reputed to have laid bare the lineaments of a general theory of systems of any and every kind" <sup>4</sup> and proceeds, with reference to the work of theorists such as Parsons and Blau who, in common with the "dominant mode of perception among system theorists", place "emphasis on the two separate terms" of any binary divide and fail to focus "on division or boundary between terms", and Gouldner, Bateson, Saussure and Derrida who make the crucial move in this direction, to develop the idea that division itself is "of fundamental significance in understanding the nature of information or structure".<sup>5</sup> He uses Rubin's double profiles, an old favourite with theorists of art and of perception, to graphically illustrate the fundamental undecidability of figure and ground (Figure 3.1.1.)



Figure 3.1.1.  
Rubin's double profiles

4. COOPER, Robert. "Organization/Disorganization" *Social Science Information*. SAGE, 25:2, 1986, pp.299-335 (p.332).

5. *ibid* p.306.

In differentiating modes of perception, one side of the dividing line must be suppressed in order to see the other as the figure. To see the opposite side as figure we must switch to suppressing the first side of the line. In a non-differentiating mode of perception we may focus on the boundary itself but only by suppressing the normal tendency to seek a Gestalt, an order that precedes meaning

in the image. Ehrenzweig, in constructing an account of Cezanne's and Klee's visual achievement, proposes that there is also the possibility of a de-differentiating mode of perception through which one can, perhaps only fleetingly, see Rubies double profiles as two figures kissing.<sup>6</sup> Although Cooper makes the observation that "it is the act of separation which, paradoxically, creates the perception of something that is also whole and unitary" he is not proposing this last, and I will argue necessary, step of de-differentiation, a point to which I will return later in this thesis. Even though Cooper's analysis may not go far enough there are still a number of useful points to pick up in relation to the approach to organization in the current study.

## Difference

Initially, the figure is seen as a positive sign and it is possible to conceive of it, in a commonsensical way, as the "carrier of meaning". But, because later the figure can only be understood as a positive figure if it is also seen as the negative of that which surrounds it, we have a formulation for the idea of meaning which depends upon the sign as the "effect of difference". Saussure makes the first of these moves when considering the individual sign in language and the second when considering the language as a system. Cooper interprets this duality in a way which suggests that "action is prompted by a negation", that "the action of difference" is motivated by "the lack or absence of the 'preferred' state".<sup>7</sup> However, for reasons which relate to the possibility of a de-differentiating mode of perception, I find it difficult to agree with this argument as the general case. The notion of 'choice' between states - and we should perhaps recall

6. EHRENZWEIG, Anton. *The Hidden Order of Art*. Weidenfeld & Nicolson, 1967. p.36.

To illustrate the point Ehrenzweig paraphrases Klee:

*...the artist can either emphasize the boundary contrast produced by the bisection of the picture plane; in which case he will keep his attention on one (endotopic or exotopic) aide of the line he draws; or else he can scatter his attention and watch the simultaneous shaping of inside and outside areas on either side of the line, a feat which the gestalt psychologists would consider impossible. ... Somehow - as Paul Klee postulates - a good artist must be able to hold the entire picture plane in a single undivided focus.*

7. op cit. p.310.

8. See section 2.4 note 60.

9. COOPER, Robert. "Information, Communication and Organization: A Post-Structural Revision" *The Journal of Mind and Behaviour*. The Institute of Mind and Behaviour, summer 1987, Vol.8, No.3. pp.395-416.

Cooper uses Freud's analysis of the unconscious [Beyond the Pleasure Principle], which is "characterised by a 'compulsion to repeat' itself", to argue that information can be thought of as "a reversible whole that vacillates between two terms". He then defines two forms of action: (1) *a primary process which is a conflation and negation of the individual terms ...* and (2) *a secondary process which suppresses primary activity by accenting the individual terms.*

This is still potentially ambiguous, the difference between the undifferentiated and the de-differentiated is important, as is the difference between differentiation and re-differentiation. To the ancient Greeks the undifferentiated *pharmakon* had a single, if broad, meaning. To us the word's direct descendant "pharmacy" has a more specific meaning from which have become differentiated, by other terms, the meanings "poison", "drug", "cure", and "magic spell". Although we cannot recapture the original *pharmakon* we can, with the help of Derrida and others, de-differentiate this cluster to glimpse, even if only fleetingly, a multivalence which a current reading of *pharmakon* requires in interpretation. The re-differentiation of *pharmakon*, if we were to find this a useful action, holds the potential for altogether different terms and

those definitions which propose that design is about initiating change towards a more desirable state of things<sup>8</sup> - even if not taken to imply some form of practical reasoning, nevertheless implies a form of determinism or givenness, whereas, in most cases, possibilities are numerous and precise future states impossible to predict.<sup>9</sup> They come into being, that is, become real, only in the process of action. Difference, therefore, is not necessarily a question of what is between the commensurate, in the sense that the "a priori for the subject" are commensurate, it is rather a question of potential and therefore of energy, which may be released only through action, through movement, and the speed of that release and its patterning are what the process brings into being.<sup>10</sup> Hence, to bring the notion of 'creativity' into the argument, creativity is the automatic non-rational quality of realizing difference. Derrida's contribution is to point out that the problem of choice between given terms disappears. In these terms, creativity is the play of difference, the continual movement that chases after the always deferred presence. In this formulation we can see the importance of Ehrenzweig's ideographic standpoint, in design the argument is not primarily about interpreting a given system of signs but rather it is about participating in its transformation (or, in some presupposed past, its formation). Foucault makes a parallel point in respect of historical analyses:

*the problem is no longer one of tradition, of tracing a line, but one of division, of limits; it is no longer one of lasting foundations, but one of transformations that serve as new foundations.*<sup>11</sup>

## Space

The value of the metaphor of space needs to be made explicit. When talking of 'possibility', the 'play' of



associated meanings, why not the neologisms: “pharmatech” for medicine based on western science and technology, and “pharmagic” for that based on faith and ritual? See: BROGAN, Walter. “Plato’s Pharmakon: between two repetitions”, in SILVERMAN, H. J. (ed.) *Derrida and Deconstruction*. Routledge, 1989. pp.7-23.

10. See: 2.1, note 32.

11. FOUCAULT, Michel. [1969] *The Archaeology of Knowledge* Trans. A M Sheridan Smith. Tavistock, 1972. p.5.

12. The zero dimension or zero degree arises out of two related differential factors, (1) the oscillation of dimensional value involved in observation at different degrees of resolution. This is a phenomenon Virilio illustrates by describing a ball of thread at the 10-meter degree of resolution (DoR) where it appears as a point and is thus zero-dimensional, through, 10-centimetre DoR where it is a ball and thus three-dimensional, 10-millimetre DoR where it is a construction of threads and thus one-dimensional, 0.1 millimetre DoR where each thread is a column and thus three-dimensional again, and 0.01mm DoR where each column dissolves into a construction of fibres and thus again one-dimensional. In any system there is a certain degree of resolution above which everything becomes zero-dimensional, and at and below the degree of resolution associated with sub-atomic distances the same zero-dimensionality pervades. And (2) the levels of order and detail in any organization. Simple division

difference, and ‘presence’, even if perpetually deferred, we invoke a visualization of space which is primevally a point, the zero dimension or zero degree,<sup>12</sup> undifferentiated and infinite in potential, and which, as an inevitable response to that potential, succumbs to an endless and unpredictable process of differentiation and expansion without a centre. ‘Possibility’ thus crystallizes out of potential. ‘Play’ is thus two-sided, both free variation and room for manoeuvre - the micro-space of indeterminacy. And ‘presence’, or identity, is that which is realized only at the expense of perceiving movement, or difference. We need look no further than theoretical physics to see the same invocation at work: from the big-bang theory to the in-folded multi-dimensionality of the ultra-microscopic and the sub-atomic uncertainties of position and speed.<sup>13</sup> Space provides the generic organizational metaphor.

As space becomes differentiated into zones, spatial relationships are created. These relationships are defined by boundaries or, as any boundary is inevitably a defining aspect of two zones, by interfaces.<sup>14</sup> The interval which an interface occupies is not fixed, rather, it is dependent upon speed of interaction,<sup>15</sup> information, the play of *différance*. In the term ‘interval’ is expressed that uncertainty which is temporal at the expense of spatial and vice versa.<sup>16</sup> Complexity of organization is a function of interactivity, the greater the interactivity the greater the number of interfaces between actors and therefore the finer the differentiation of detail within the space. Cooper makes an important point here about the perception of interactional structure:

*a conception of ‘social system’... must dispense with the perception of an interactional structure that is fully given to us in the present; social structure can only become ‘present’ to us through différence.*<sup>17</sup>

into two represents the first degree of order, the one-dimensionality of opposing polarity, division into three either continues the first degree of order by creating an intermediate between poles or creates a second degree of order, the two-dimensionality of a choice of choices, and so on into the multi-dimensionality of complex possibility. Within complexity there always exists a micro-level of lower degrees of order and, at the lowest level, an absolute limit, the zero degree of order, the zero-dimensionality of undifferentiated space, non-directionality, disorganization, infinite potential, which becomes the site of action, difference, creativity.

See: VIRILIO, Paul. [1984] *Lost Dimension*. Trans. Daniel Moshenberg. New York: Autonomedia (Semiotext(e)), 1991. pp.53-4. and COOPER, 1986, pp.316ff.

13. DAVIES, Paul & John GRIBBIN. *The Matter Myth: Beyond Chaos and Complexity*. (first published by Viking, 1991.) Penguin, 1992.

Big bang, pp. 114-18. Microscopic virtual wormholes, pp.269-73 & 276-6. Heisenberg's uncertainty principle p.213. and also CAPRA, Fritjof. *The Tao of Physics*. Wildwood House, 1975. pp.171-3.

14. COOPER, 1986, p.300. The problem with the implication of Gouldner's idea that organizational activity is focused on the boundaries between system parts is that it suggests too hard a notion of system – "system parts" suggests fixed elements, like the parts of a machine, in the same way "boundaries" suggests

And this applies not only to social system but to any socially constructed system or space. The generic idea of space privileges neither the human nor the non-human actor. An interface may be between any pairing of types of actor, and, in principle, an actor may have interfaces with an unlimited number of other actors. In this view of organization, the actor is not the generator, indeed, the actor is not even a fixed entity. The actor will tend to change in role, type and/or position as the pattern of interactivity within the space continues. The concept of 'actor network' captures some of this dynamism quite clearly.<sup>18</sup> Information, and different classes of actor - human and non-human, natural and artificial, etc. - have equal status. Indeed, precisely what one sees depends upon what one sets out to find. If one looks for the fixed structure it will be at the expense of finding the interactive dynamics, and vice versa. Foucault raises this point in relation to the history of science at the microscopic and macroscopic scales:

*...events and their consequences are not arranged in the same way: thus a discovery, the development of a method, the achievements, and the failures, of a particular scientist, do not have the same incidence, and cannot be described in the same way at both levels.*<sup>19</sup>

A particular class of phenomena, 'distance effects', radically affects both interactive dynamics and the perception of structure. Distance effects, which have been predicted in physics to effect the micro-level of organization,<sup>20</sup> are already very real at the macro-level of social organization. They are the telematic effects of the global net and the telemedia. Within these is a multi-dimensional virtual space able to instantaneously connect distant places and times: an invasive virtual space that provides an ever denser and more mutable fabric to organization.<sup>21</sup>

In organization, therefore, we find ourselves in a space which is without definite boundary and subject to

fixed edges. I want to suggest something altogether more fluid and dynamic.

15. What is meant by “interaction” here is the mutual exchange of information, material, energy. There are some senses in which everything reduces to energy. Matter is just a particularly dense form of energy and information is simply patterns of energy.

16. What Derrida posits is “a world that is continually deferred, postponed in space and time” [COOPER, 1986, p.313.], that is, a world of intervals.

*An interval must separate the present from what it is not in order for the present to be itself...* [ibid. quotation from DERRIDA] Through the play of *différance*, the interval is thus also that which divides the present in and of itself, and leads to a dynamic concept of spacing, intervals upon and within intervals.

17. COOPER, 1986, p.313.

18. See: 2.1, note 31.

19. FOUCAULT [1969], pp.4-5.

20. The “microscopic virtual wormholes” referred to above (13).

21. MATTHEWS, Geoff. “Invasion of the Body Snatchers: Architecture and Virtual Space” *Culture Theory Criticism Occasional Papers*, University of Humberside, 1994.

22. FOUCAULT [1969], p.11.

23. In deconstructing the works of great thinkers and writers

unpredictable processes of differentiation in which the interface is a volatile element; we are never simply observers but always, to some degree, participants in transformations which are without centre; and we are faced with the uncertainty of structure and change - one can only be focused at the expense of blurring the other - not simply as a limitation of observation but because organization possesses neither certain structure nor certain change, the interval is bivalently indeterminate. What we face, to paraphrase Foucault, is an epistemological mutation of organization which is not yet complete.<sup>22</sup>

## Interstitial Knowledges

Although, in these terms, the possibility of a general theory reduces to a paradox, this does not mean the end of organization, far from it, as Foucault suggests in relation to history the situation has entered a phase of (apparently continual) transformations. In this we are liberated from the prospect of a totalizing closure: the only big idea left is that there are no big ideas left. This is the message of deconstruction,<sup>23</sup> of post-structuralism,<sup>24</sup> of postmodernism,<sup>25</sup> and of the interpretive theory (hermeneutics) revitalized by such as Gadamer and Ricoeur.<sup>26</sup> Although, in the negative, global knowledge may be irredeemably fractured, in the positive, there is a growing necessity of what Geertz calls ‘local knowledge’.<sup>27</sup> This is the necessity of working within the irruptive field of discontinuous knowledges – Bernstein’s ‘new constellation’ - or more properly, the interstices that are, in our generic spatial terms, ‘intervals’.

*... rather than face an array of natural kinds, fixed types divided by sharp qualitative differences, we more and more see ourselves*

Derrida aimed:

*... to refute the author with arguments derived from the latter's own writings, to demonstrate - successfully in many cases - that the very premisses on which the author bases his case wilt if pursued to their logical conclusions, defeat the original arguments.*  
GLUSBERG, Jorge. (ed.) *Deconstruction: A Student Guide*. Journal of Architectural Theory and Criticism, 1:2:91. Academy Editions, 1991. p.31.

24. *For post-structuralists, unity and universality are inherently oppressive and any move which promotes their disintegration is to be approved.*

SARUP, Madan. *Post-Structuralism and Postmodernism*. Harvester Wheatsheaf, 1988.

Of course, to go along with this, one has to regard the idea that there is a "right to difference" as the only 'big' idea left.

26. *Simplifying to the extreme, I define postmodern as incredulity towards metanarratives.*

LYOTARD, Jean-Francois. [1979] *The Postmodern Condition: A Report on Knowledge*. Trans. Geoff Bennington & Brian Massumi. Manchester University Press, 1984. p.xxiv.

26. *Tradition, part of whose nature is the handing-on of traditional material, must have become questionable for an explicit consciousness of the hermeneutic task of appropriating tradition to have been formed.*  
GADAMER, Hans-Georg. *Truth and Method*. Sheed & Ward, 1975. p.xxi.

*surrounded by a vast, almost continuous field of variously intended and diversely constructed works we can order only practically, relationally, and as our purposes prompt us. It is not that we no longer have conventions of interpretation; we have more than ever, built ... to accommodate a situation at once fluid, plural, uncentred, and ineradicably untidy.*<sup>28</sup>

The composition of intervals, which this idea of praxis promotes, is a pragmatic, ironic, creative business, and follows on from the philosophical standpoint outlined above. Not only are knowledges discontinuous, they are also contingent and incommensurable, that is, their proximity is visible in a model but not measurable in actuality.

## Model space

As an example of the composition of intervals in modelling, Hofstede's use of the map series to present a picture of cultural differences in attitudes to social organization - each map defined by pairs of dimensions: four dimensions in all - neatly raises the question of what kind of space it is that is being created in an organizational model of this type.<sup>29</sup> The four dimensions of his model, each derived from the analysis of a vast quantity of data collected through questionnaire-based surveys, are shown in figure 3.1.2.

Label	Scale
1. Power distance	small .....large
2. Uncertainty avoidance	weak .....strong
3. Individualism	collectivist ..... individualist
4. Masculinity	feminine ..... masculine

Figure 3.1.2

Hofstede's four dimensions of national culture

In Gadamer's notion of the hermeneutic, one has to accept that the only big idea is that one has to take things for what they are: if the competition between big ideas is dead then they all become rather small.

27. GEERTZ, Clifford. *Local Knowledge*. New York: Basic Books, 1983. p.16. To conclude his introduction Geertz offers this thought on what he means by the importance of local knowledge:

*To see ourselves as others see us can be eye-opening. To see others as sharing a nature with ourselves is the merest decency. But it is from the far more difficult achievement of seeing ourselves amongst others, as a local example of the forms human life has locally taken, a case amongst cases, a world among worlds, that the largeness of mind, without which objectivity is self-congratulation and tolerance a sham, comes.*

28. *ibid.* pp.20-1.

29. HOFSTEDE, G "Motivation, Leadership and Organization: Do American Theories Apply Abroad" in PUGH, D S. (ed) *Organization Theory*. Penguin, 1971. pp.473-99.

30. Work such as that carried out by Judith Blau (1984) and Dana Cuff (1991) on the nature of architectural practice in the USA is rare, and work such as Maria Brunelli's on design and museum management is unique. The kinds of questions which need to be asked of exhibition planners, designers, developers and managers for example, are: Where does the design process begin and end? How does an

There is no doubt that the same principles of series mapping can be used to make visible any organized comparative space. And one could suggest a dozen empirical studies that could be initiated in the area of museums and design.<sup>30</sup> However, it is not the specific pattern that might result from such studies that interests us here, but rather the legitimate scope for such mapping projects in the context of this project. What are the appropriate dimensions of such mapping models? And how does the mapping model *per se* relate to the generic spatiality of organization and, in particular, to its indeterminacy at the level of the interval?

In series mapping presentations such as Hofstede's, there is no easy process of commensuration - such as the process of scaling and Mollweide Equal Area Projection we find in popular world atlases - between the two-dimensional maps and a physical space in the geographical sense.<sup>31</sup> Yet, at the same time, the maps describe a four-dimensional space in which national cultures are precisely placed in relation to each other, and in which, through visual interpretation, cultural regions can be seen rather in the same way that constellations of stars can be seen in the night sky. Geographical or, in the physical sense, spatial proximity is irrelevant to this notion of retinal proximity. The linguistic formulation of concepts, such as 'power distance', 'uncertainty avoidance', 'individualism', and 'masculinity', and their quantification in statistical and probabilistic terms, defines them as qualitatively different to concepts such as 'geographical distance', 'Cartesian plane', and 'Euclidean space' which are quantified in physical comparative terms.<sup>32</sup> In a spatial model of the latter we compare like with like - distance with distance, area with area, etc. - whereas in the former a systematic process of abstracting, transforming, interpreting and

exhibition team organize? Are there defining characteristics of the 'good' curator, designer, conservator, etc.

BLAU, Judith R. *Architects and Firms: A Sociological Perspective on Architectural Practice*. MIT Press, 1984.

BRUNELLI, Maria Teresa. "The Role of Design in the Management of Museums" (PhD thesis, Institute of Advanced Studies, Manchester Metropolitan University, 1993).  
CUFF, Dana. *Architecture: The Story of Practice*. MIT Press, 1991.

31. For example, maps showing the whole surface of the globe in "Section Three: The world as we know it" *The Reader's Digest Great World Atlas*, Reader's Digest Association, 1962. Mollweide's Equal Area Projection translates the spherical surface onto an ellipse whose major axis is twice the length of the minor axis and, although it distorts shape, preserves area relationships.

32. I am aware that quantum effects can only be described in probabilistic terms. However, at macroscopic levels, the incalculably large ratios involved in the probability of mechanical events may be reasonably interpreted as either certainty ( $\infty:1$ ) or impossibility ( $1:\infty$ ).

33. Map-graph-matrix. I am suggesting here a particular composite which is not fully present in any of the separate terms:

*Map: a representation on a reduced scale and usu a flat surface of (part of) the earth's surface, showing geographical features, political divisions, population distribution, etc. ...a repre-*

visualizing must take place to turn the linguistic formulation of the original concept into the visual formulation of the map-graph-matrix.<sup>33</sup>

The space of such models is used to render visible rather exotic, and otherwise invisible, virtual spaces. Such virtual spaces encompass all of the possible connecting and dislocating spaces of the multidimensionality that lies behind the socially constructed actual space of architecture, society, the body and geography - the worldly realm.<sup>34</sup> But, paradoxically, they also encompass an ambivalence towards the virtual spaces of the global net and the telemedia - the virtual spaces that have already invaded actual space - which, via computer and televisual screen, are vital to the construction, storage, transmission and presentation of the most complex models. The space created by a model is thus multidimensional and virtual. It invokes this through limited means - the two-dimensional graphic image and the three-dimensional construct - which, in phenomenological terms, put a limit on the complexity of objects that may be rendered visible and sensible.

### Simplification and adequacy

In this sense - of encompassing both connecting and dislocating virtual spaces - organizational modelling always operates at a distance, across an interval in organization (this describes the ideographic, reflexive condition of the embedded subject), and is always associated with the attenuation of information in making the process amenable to intervention. Between the linguistic and visual fields there is both an interval and a parallel. "The attenuating function of myth" is a mirror of, and an accompaniment to, the attenuating function of the model - where myth makes legible/readable, the model makes visible/

sensation of something in map-like form.

**Graph:** a diagram ...expressing a relation between quantities or variables, usu having two (or more) straight lines (AXES) with reference to which points or lines are located on the diagram.

**Matrix.** a substance, environment, etc. within which something else originates or develops ...a rectangular array of numbers or other mathematical elements that can be manipulated and transformed according to special mathematical rules ...something resembling a mathematical matrix...

LONGMAN DICTIONARY OF THE ENGLISH LANGUAGE, Longman, 1984.

34. The parallel here is that discussed above "Space" para 1, for references see note 13.

35. JACKSON, N V & P CARTER. "The Attenuating Function of Myth in Human Understanding", *Human Relations*, Vol. 37, No. 7, 1984, pp.515-33.

*The simplicity or complexity of the required explanation ... relates to the state of complexity of the environment existent at a given time. ... the low-variety individual can only cope with the high-variety external world via an attenuating device which regulates the complexity to an extent that it can be comprehended by the individual ... the description and function ... ascribed to myth is precisely that of an attenuating device. [pp.523 & 528.]*

36. Saussure tends to focus on the relationship between the signifier and the signified and to underplay the dynamics of the semiotic process, Eco admits a

tangible - and each performs a constructive cognitive rôle in understanding which is narrative and spatial respectively.<sup>35</sup> Clearly I am not suggesting that myth and model are, in a mathematical sense, similar - the relationship between them is poetic - and that translation is a mechanical process - it is a *poesis*. Neither am I suggesting that "socially constructed actual space" provides a definitive reality beyond which lie unreal supplements necessary for meaning - socially constructed reality is immanently multidimensional. In structuralist terms the signified is a fuzzy edged, shifting zone of possibility, and the signifier a designed object which is visible, contingent, conventional, and mutable. Between them, therefore, they constitute a sign which is profoundly undecidable. Our concern with the interval and the dynamics of organization, justified by the profound uncertainties of objective and subjective presence, makes the play of *différance* - information - central to the creative activity of modelling, and the partiality and plurality of metaphor crucial to the *poesis* this represents. A semiotic schema would imply clearly boundaried realms for the form of notation, the objective denotation, and the subjective connotation (Figure 3.1.3).<sup>36</sup>

NOTATION	DENOTATION	CONNOTATION
graphic or material construct	organizational object	metaphorical image

Fig. 3.1.3

Semiotic schemata for organizational modelling (after ECO, 1979.)

Even though, in Saussurian terms, the arbitrary nature of "a particular combination of signifier and signified" is the central problematic, the status of the sign as an entity implies a singularity which is equally problematic.<sup>37</sup> By

notion of 'unlimited semiosis' in which the interpretant may turn out to be of no use at all and, since it is able to define any semiotic act, may in the last analysis become purely tautological. Yet its vagueness is at the same time its force ...

ECO, Umberto. *A Theory of Semiotics*. Bloomington: Indiana University Press, 1979. p.71. The unresolvable tension between the coherence of the interpretant in the instant of a single semiotic act and its tendency to evaporate in any longer retrospective view is crucial.

37. CULLER, Jonathan. *Saussure*. Fontana, 1976. p.19.

38. *ibid.* pp.37-8.

39. It should be noted that although Saussure concentrated on the synchronic perspective in relation to signifiers, in principle his argument applies also to signifieds and Culler does argue this proposition through. *ibid.* pp.44-5....

insisting, in clear-cut either-or terms, that the synchronic must be privileged over the diachronic in analysis Saussure perhaps, his interpreters certainly, conveniently skirt around some of the more paradoxical aspects of the system of language. The notions of the purely synchronic and the purely diachronic are in fact both "methodological fictions".<sup>38</sup> The linguistic system of English, even more so than that of French, is not a definite reality. Definitive English is a myth, we need only think for a moment about the variety of speech groups, native speakers all, who do not understand each other. This is not merely a question of regional accents - a problem of *parole* - which admittedly can be quite extreme in their differences, it also involves dialect, substantial areas of vocabulary and variations in syntax and grammar, particularly in more complex structures - all problems of *la langue*. Some areas of vocabulary travel in time from one speech community to another, and from the small community to the larger. For example, the first users of neologisms related to information technology in the 1960s were systems designers and scientists: the general population today would understand much more of what they said to each other than did the wider community at the time.<sup>39</sup>

Taking into account this temporal blur in any idea of the synchronic state, to be methodologically sound, any slice through the continuum of a language system's development should not be strictly synchronic - not the system frozen in a moment of time (Figure 3.1.4) - but rather should be an oblique and fuzzy edged section cut across a diachronically viewed system (Figure 3.1.5.) The former may be a conceptual possibility, perhaps, but not only would it involve a distortion of existential and social reality, which are deemed by Saussure to be irrelevant 'diachronic' concerns, it would prove a practical impossibility.



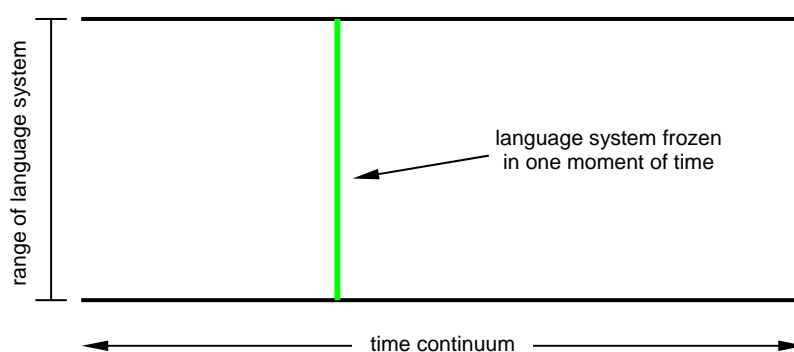


Figure 3.1.4

---

The impossible synchronic moment

---

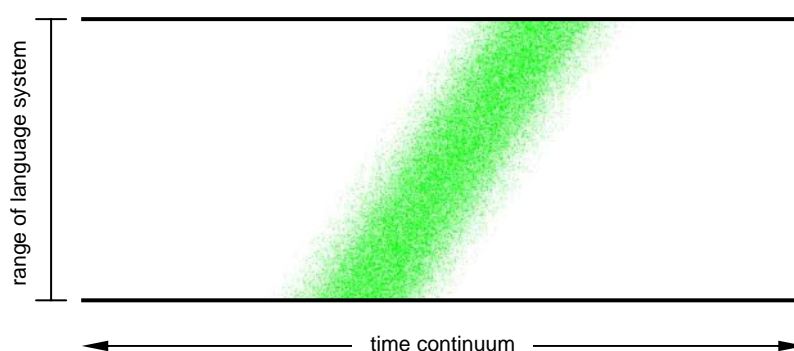


Figure 3.1.5

---

The pseudo-synchronic slice

---

This excursion into Saussure's ideas on the language system has highlighted the point of departure from structuralism with which the notions of system and model must deal in this project. The arbitrariness of signifier + signified, of notation + denotation + connotation, in a dynamic pseudo-synchronic view is overtaken by the uncertainty of the sign which is a function of speed. The language has no real existence outside of our participation in its transformation. The slower the process the more multi-dimensional and dynamic it will appear, too slow and its apparent complexity will overwhelm our ability to perceive or construct order, the faster the process the closer it will approach the zero dimensionality and invisibility of stasis.

The museum•design•organization complex, which is the focus of this modelling exercise, presents the possibility of bringing into view exotic life in the strange space that is defined by dimensions that are extraordinarily divergent in their properties.

## 3.2 Design

### The *différance* of 'design'

'Design' is a most ambiguous term.

*The complexity of living organisms is matched by the elegant efficiency of their apparent design ... this amount of complex design cries out for explanation ...*<sup>1</sup>

The word 'design' can be used to explain anything that appears to have some organized structure and purpose. But this is not very helpful. Clearly there is a difference between the human agent planning and participating in the process of organizing and structuring things and rationalizing their purposes, and the 'blind processes' which we either unconsciously try to mimic or reconstruct, or which we believe parallel, in some ill-understood way, a particular and distinctive form of human behaviour. To see a connection between 'nature' and 'human nature' in one of these ways is unremarkable enough. But this is not to say that the phenomena are one and the same.

1. DAWKINS, Richard. *The Blind Watchmaker*. Longman, 1986. p.xiii.

2. PAPANEEK, Victor. [1972] *Design for the Real World*. Paladin, 1974. p.18.

This view is a contemporary humanist counter to the theological *Argument to Design* and, in Papanek's case, an entirely compatible, indeed unavoidable, complement to his main thesis: that industrial design as the slave of run-away free-market capitalism is despicable and that designers should turn away from its reliance on gimmickry and greed and turn instead towards the imaginative understanding and satisfaction of genuine human needs.

*The reason we enjoy things in nature is that we see an economy of means, simplicity, elegance and an essential rightness in them. But they are not design. Though they have pattern, order, and beauty, they lack conscious intention. If we call them design, we artificially ascribe our own values to an accidental side issue.*<sup>2</sup>

Human organization can be framed as a questioning of the design impulse. If, on the one hand, the best organizations, 'ideal' organizations, develop as self-regulating and spontaneously metamorphosing systems perhaps the notion of 'organizational design' is anathema. If, on the other hand, it is only when the values and intentions of the human element in any system are consciously projected through its internal relations and workings (almost inevitably they must be) that we realize 'organization' at

all, then human organizations are, by definition, designed.

It takes vision and skill at working the material of any design object to realize complex goals. If those goals include, as they might in an organizational design context, the goal of 'evolutionary form', of the ability of the end product to survive through self-adjustment to a changing environment, does success mean the end of 'design'? I mean the question not in the trivial sense of the rational production of the final design, the design to end all designs, but, in the ethical and aesthetic senses of ending the dominion of the human, of finally dissolving the object-subject dichotomy, of returning the consciousness and the being to 'nature'. Perhaps it would if design were not infinitely regressive. But it is. Design is not about the closure of practical situations - their 'resolution' - it is about their projection towards a desired future. The complexity with which design deals is such that only a limited period of success is possible before the myriad forces entailed generate further practical situations in which direction is desirable. Even evolutionary form is susceptible to disadvantageous mutations and possible extinction. Design merely nudges such forms in the direction of beneficial 'genetic' change, towards the next 'moment' in its evolution as though loading the material cultural dice before they are next thrown into our future. However, the 'material' of the design object in organizational design is, or at least begins as, human.

What kind of design is it that abstracts the individual from its being, fashions the collective in the image some constructed object of knowledge - machine, organism, brain ...<sup>3</sup> body, family, garden - that treats the living, thinking, feeling 'us' as a transmutable material, a 'them', at the service of an 'Other'? What kind of design is it that only exists on the borderline between the un-organized

3. MORGAN, Gareth. *Images of Organization*. Sage, 1986.

and the dis-organized, between the natural 'order' and our changing projections of ourselves, between the ends of science and the process of culture?

In the end, the design of organizations is no different to any other 'design'. Whatever objects are differentiated out of the material reality by design are, by the very process of that differentiation, implicated in the human understanding of the world, in its shaping and in the human relations which are its matrix. Perhaps we should say that no organizational design should ignore the implicated material culture. Material culture precipitates human organization which forever hangs above a sedimented past continuously settling out as the chemistry of design does its work. This is not evolution so long as material culture is implicated, although it may be a design that mimics evolution. In nature evolution does not mimic design: we simply see some of our values reflected back at us: it is in our nature to desire meaning and, therefore, to perceive pattern and to construct order in things.

The idea of explaining things in terms of design is different to the idea of designing things. Although, in order to initiate and progress the process of designing, there is clearly a need to engage in a parallel and interacting process of analysis which uses the language of design in generating understandings.

The scope of analysis may take in the widest range of phenomena that **appear** to have some organised structure and purpose. Our ability to recognise pattern in things, to impose, by linguistic and visual means, an order on things, tells us something about a relationship between subject and object. It does not necessarily tell us much either about the object or the subject in themselves. In analysis, therefore, 'design' is a question of differences, differences which are not merely open to reinterpretation but different in each

moment of perception. Any resolution of pattern, any definitive form and meaning, is thus perpetually deferred. Design is also the play of *différance*, an undecidable state, a state of becoming. Design only exists in the interval between the subject and the object. In design the relationship between subject and object is the interval structure of a matrix which is its space, its reality; the subject no more has an independent reality than does the object.

We can talk of the 'subjective world' and the 'objective world' only in the sense that design is experienced in certain ways, for, although we cannot step outside of the matrix without losing an aspect that generates its space, we work within that space with a feeling for the potential, the possibility, which the aspects of subject and object together create.

The beauty of the word 'design' is that it refers to two completely different sets of meanings which are nevertheless inseparable: the epitome of a conceptual constellation. The philosophical faces of this duality are ontological and epistemological. Design ontology regards design as *the things of order*, and from this we get the dominant theme in design history – a material culture, a system of real things that embodies and carries forward complex meanings, beliefs and values. Design epistemology, on the other hand, regards design as *knowledge in practice*, which defines the dominant theme in the design studies tradition of humanistic and methodological investigation, by turns a functional, psychoanalytical, existential and praxiological project.<sup>4</sup>

4. ARCHER, Bruce. 'A View of the Nature of Design Research' in JACQUES, Robin. & James A. POWELL. (Eds.) *Design: Science: Method*. Westbury House, 1981. pp.30-47.

#### **'design' and 'Design'**

It will be useful here to make a distinction between uses of the word 'design'. This device will serve a similar purpose

to that which Rorty achieved by his distinction between 'philosophy' with a small 'p' and 'Philosophy' with a capital 'P'.<sup>5</sup> There is a sense in which design is a central human trait, related to the idea of understanding, but primarily concerned with our being in the world, which involves the perception and imposition of pattern in things.

*All that we do, almost all the time, is design, for design is basic to all human activity. The planning and patterning of any act towards a desired, foreseeable end constitutes the design process. ... Design is the conscious effort to impose meaningful order.*<sup>6</sup>

In as much as we all shape the world around us to serve our needs, we all design and from this point on I will refer to this as 'design'. But there is an altogether different, and to some a quite dubious, realm of design which is undertaken on our behalf by trained specialists. Professional designers plan, devise, specify and supervise changes in the socially constructed world and they do so by working on the less stable fringes of some of the most stable institutions. Professional designers are involved in a perpetuation of the capitalist consumerist enterprise – this is the idea that many sceptics so distrust.

*... humanity all over the globe, ever more artificially supplied and thus often victimized, appears now at the mercy of a rampant, over-advertised industrial technology which is flooding us off our physiological bearings ...*<sup>7</sup>

5. See above: 2.4 Paradigmatic Space, note 31.

6. PAPANEEK, 1972, p.17.

7. NEUTRA, Richard. *Survival Through Design*. Oxford University Press, 1954. pp.vi-vii.

8. PAPANEEK, 1972, p.9.

9. MARGOLIN, Victor (ed.) *Design Discourse: History Theory Criticism*. University of Chicago, 1989. p.8.

*There are professions more harmful than industrial design, but only a very few of them. And possibly only one profession is phonier. Advertising design, in persuading people to buy things they don't need, with money they don't have, in order to impress others who don't care, is probably the phoniest field in existence today. Industrial design, by concocting the tawdry idiocies hawked by advertisers, comes a close second.*<sup>8</sup>

Equally, they are involved in a 'distinct sphere of cultural transformation',<sup>9</sup> an interpretation put forward, for

example, by Margolin, Buchanan, Vitta, Sparke, and others: ‘...design involves the vivid expression of competing ideas about social life’,<sup>10</sup> the problem of the symbolic identity of designed objects ‘requires that it be continually transformed while it remains faithful in substance to its original function’,<sup>11</sup> and, in general, this transformation involves the shaping and transmission of meaning, beliefs and values through the socially constructed material culture of designed objects, such that, at the end of the day, ‘designed artefacts act as cultural ciphers’ and ‘design simply becomes one of the forms of mass communication in modern society...’.<sup>12</sup>

What I will refer to by ‘Design’ then will be that institutionalized human activity which defines and solves complex problems by visual and other cognitive means; exercises a range of mental and physical skills in the organisation, interpretation and communication of information related to the content as well as the process; and develops formal and technical understandings appropriate to each context.

The importance of the general term ‘design’ lies in the essential, central place given to the practical use of human faculties in approaching complex, that is, epistemologically inconsistent, practical situations. Design treats objects that do not satisfactorily succumb to a purely technical treatment. So that, in so far as engineering design suppresses or delegates ideological issues, it is on the fringes of Design. Design treats objects that pose a problem beyond the purely personal - whose outcomes must additionally satisfy social and technical criteria. So that, in so far as art and craft-based design delegate sociotechnical issues to managers and engineers or simply suppress them, they are also on the periphery of Design.

10. BUCHANAN in MARGOLIN, 1989, p.17.

11. VITTA in MARGOLIN, 1989, p.11.

12. SPARKE, Penny. *An Introduction to Design & Culture in the Twentieth Century*. Unwin Hyman, 1986. pp.xix & xxi.



## Ontological Object

Arguments about the proper subject matter of design history tend to put the greatest emphasis on the evidence of the designed artefact. In empirical research the rationale for such activities as consulting archives and interviewing designers and clients is that such sources may help to reveal the wealth of connections between the design, production and consumption of artefacts which constitute design's historical and social importance. This is the view emphasized by Walker:

*Theoretical work: design historians categorize, classify, compare, interpret and evaluate designed artefacts. ... Normally, empirical research is undertaken in respect of a predefined body or corpus of material, usually artefacts of some kind.*<sup>13</sup>

Even though later in his book 'the conventional wisdom that the designed object is the main focus of design history' is questioned, first, by dismantling the myth of the designer as 'auteur'. Much, perhaps most, designing is carried out as a group activity in which the influence of the individual on the resulting product is not clearly differentiable. But, according to Walker, even 'when designing is undertaken by a single person alone in a studio it can be regarded as social' for five good reasons: (1) education/training, (2) the influence of peer group, trends and fashion, (3) tradition and precedent (4) the social character of design 'languages', codes and styles, and (5) dependence on client and consumer 'without whom any large-scale production would be impossible'.<sup>14</sup>

13. WALKER, John A. *Design History and the History of Design*. Pluto Press, 1989. pp.4-7.

14. *ibid.* pp.50-1.

15. *ibid.* p.58.

Secondly this focus is challenged by pointing up the fetishistic fallacy which tends to isolate the artefact and suppress the wider object of design.<sup>15</sup> In practice, there are four counters to narrow artefactual obsession: (1) study that extends beyond the artefact itself 'to the design process of

which the object is the end result', (2) phenomena such as styles which 'cut across the autonomy of individual items', (3) types and series of objects that reveal 'the relations between those objects and the people who make, use and profit from them', and (4) the idea of change in particular periods or social contexts: the moments of invention, the varying 'populations' of objects, their dispersal, gradual improvement, variation in form or periodic revision or combination with other types which may give rise to a new type, are all important in diminishing the relevance of the 'classic' artefact as the object of study.<sup>16</sup>

Yet despite these powerful arguments against an idea of design history that owes much to the art history of creative individuals and autonomous works, its drive remains towards connecting the all-important material culture of designed artefacts with the broad sweep of social understandings as exemplified by the social sciences – sociology, economics, anthropology, etc. The connection which arguably remains peripheral in all of this is that between the social understandings and what designers actually produce as they design. This suggests that too great an emphasis has been placed on design as 'a quality of designed objects', not just in the simple sense of referring to 'the look of things' but in the broader sense of what the artefact represents as an articulation of and solution to a problem, as part of an economic system, and as a transmitter of ideas, a cultural object. And that not enough emphasis has been placed on design as 'what designers do', again, not just in the simple 'mechanistic' sense of preparing 'instructions for the production of manufactured goods' but in the broader sense of what designing represents in terms of problem shaping and solving, economic (and political) activity, and the everyday discourses of various social, cultural and technical practices.<sup>17</sup>

16. *ibid.* pp.58-60.

17. FORTY, Adrian. *Objects of Desire: Design and Society Since 1750*. Thames & Hudson, 1986. pp.6-7.

18. The attempt to modify the essentially linear model of design process with ever more comprehensive 'feedback' loops was taken to extremes by some. For example, see:

HICKLING, Allen. 'Beyond a linear iterative process?' in EVANS, Barrie., James Powell & Reg Talbot (Eds.) *Changing Design*. John Wiley & sons, 1982. pp.275-293.

19. BEAVEN, L and D. DRY, *The Architect's Job Book* 4th edition, London: RIBA Publications, 1983.

Also explored in ALLINSON, Kenneth. *The Wild Card of Design: a perspective on architecture in a project management environment*. Butterworth Architecture, 1993. pp.372-88.

20. DORMER, Peter. *Design Since 1945*. Thames & Hudson, 1993. p.21. (Quoted directly from Philips Corporate Industrial Design.)

21. TOPALIAN, Alan. *The Management of Design Projects*. Associated Business Press, 1980. from Fig. 1.1, p.7.

22. JONES, J C. 'A Method of Systematic Design' in JONES, J C. & D THORNLEY. (eds.) *Conference on Design Methods* Pergamon, 1963.

23. DARKE, Jane. 'The Primary Generator and the Design Process' *Design Studies* Vol 1, No 1, 1979. pp.36-44.

24. RZEVSKI, George. 'On the Design of a Design Methodology' in JACQUES & POWELL, 1981, pp.6-17.

## Epistemological Object

There are many models of the industrial/architectural design process in which an essentially linear progression through various stages from inception to evaluation is proposed, usually with the proviso that the ends of the process can be joined to imply a cycle of activity.<sup>18</sup> These models have originated both from professional and industrial contexts as a result of the accumulated traditions of practice and management, and from various theorists who have focussed on the problem of explicit methodology. For example, the former category includes the RIBA Architect's 'Plan of Work' (Figure 3.2.1),<sup>19</sup> the Philips Design Track (Figure 3.2.2),<sup>20</sup> and Alan Topalian's 1979 version of the design process (Figure 3.2.3),<sup>21</sup> and the latter category includes J Christopher Jones' 1963 model for a method of systematic design (Figure 3.2.4),<sup>22</sup> Jane Darke's 1979 Kuhnian model (adapted from Hillier, W. 1972.) (Figure 3.2.5),<sup>23</sup> and George Rzevski's 1981 Popperian 'Evolutionary Design Methodology' (Figure 3.2.6.)<sup>24</sup>

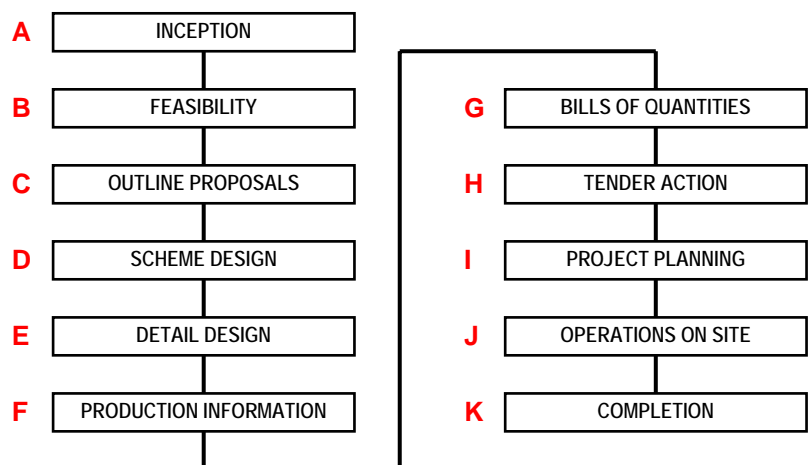


Figure 3.2.1

The RIBA Architect's 'Plan of Work' (adapted from BEAVAN & DRY, 1983.)

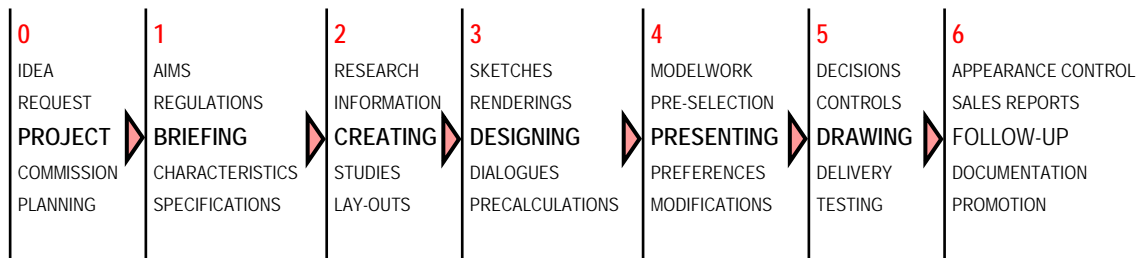


Figure 3.2.2

The Phillips Design Track

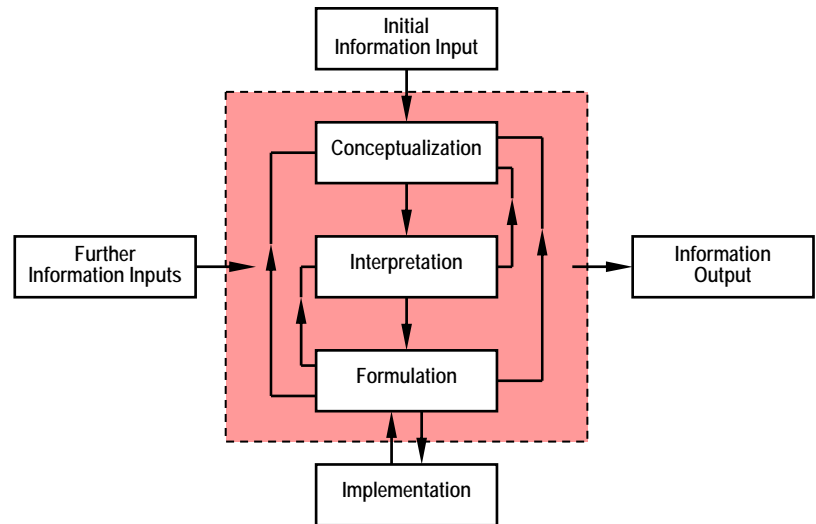


Figure 3.2.3 (right)

Design process: Alan Topalian, Design and Project Management Consultant (1979)

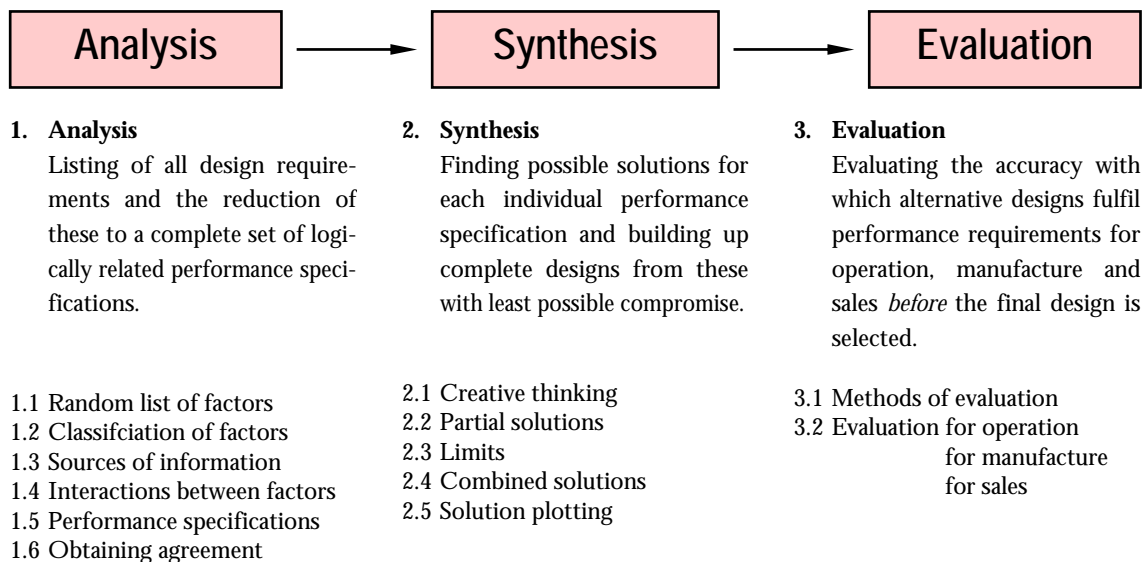


Figure 3.2.4

Design process for a method of systematic design, J Christopher Jones (1963)

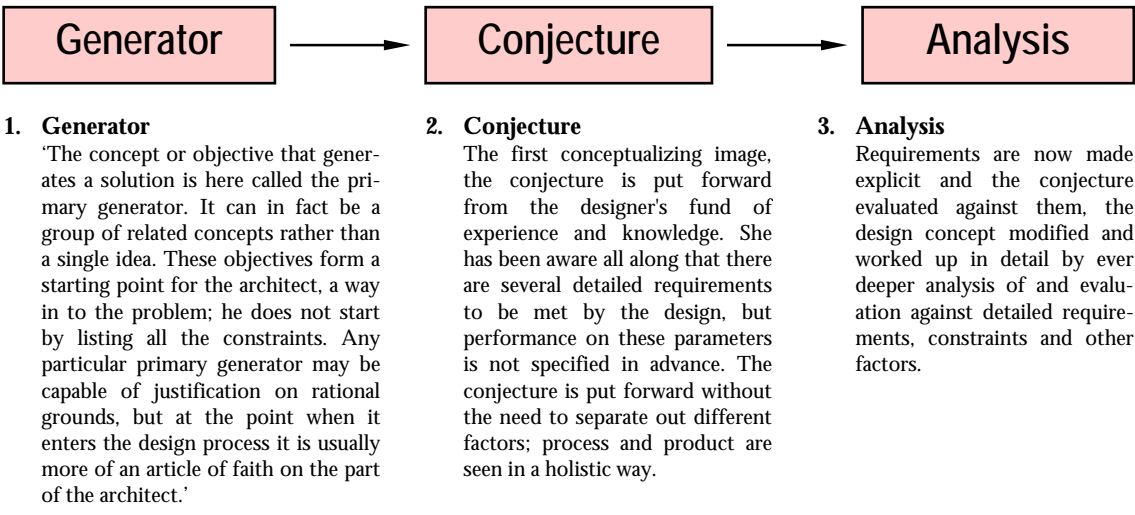


Figure 3.2.5  
Design process: Jane Darke (1979) Kuhnian model

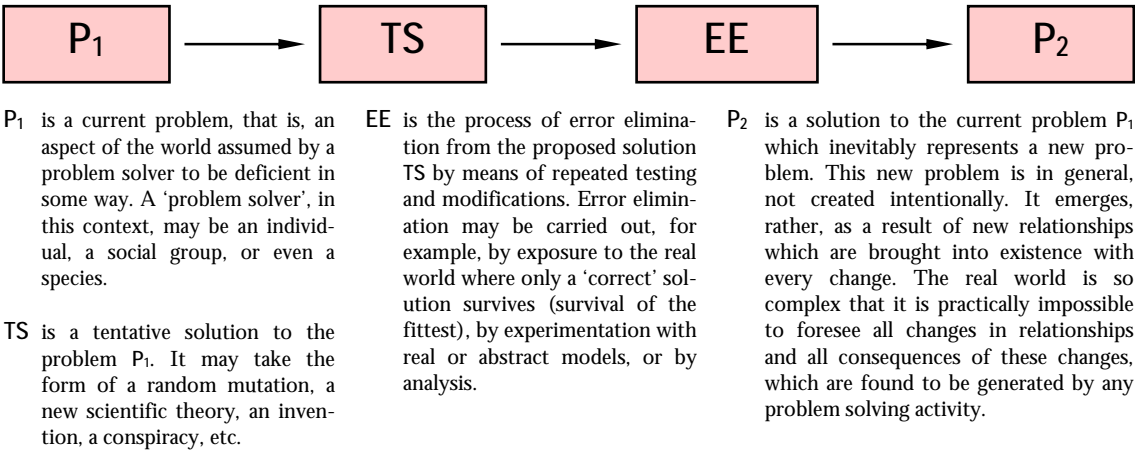


Figure 3.2.6  
Design process: George Rzevski (1981) Popperian model.

Even in Design history there tends to be an implicit acceptance of the linearity of the socio-economic space of which Design is a part. In describing a Production-consumption model of design history’s field of research, which owes its conceptual base to the Grundrisse of Marx, Walker depicts a two-dimensional space defined by a horizontal time continuum divided into repeated cycles, and a vertical

range of social phenomena. The space of the design process is placed before that of the manufacturing process which itself is succeeded by processes of circulation/distribution and then consuming/customizing (Figure 3.2.7).<sup>25</sup> Accepting for the moment the succession of synchronies implied in the vertical bands of the model, this highly simplified schema indicates the products of each process (apart from the last) as coinciding with, or marking the boundary between, one process and the next. The manufacturing and subsequent circulation/distribution processes include in their products 'designed goods', however, the design process itself does not normally result, in any immediate sense, in designed goods. Its products are 'designs and prototypes': the former I would take to include visualizations of various types, from concept sketches, mood boards and development drawings to rendered perspectives, design specifications and computer animations; and the latter, scale models as well as full-size mock-ups.<sup>26</sup> In practice, as is admitted in Walker's exposition, the linearity of the model is a myth. The heuristic purpose it serves here is to point up the conceptual difference between the designed artefact as an embodiment of design concerns, or a centre around which they may be organized, and several other possible objects of design study. The design process may be construed as an organizational centre and its products as primary evidence. However, to complete the cycle some transformation must occur between the notion that the final process 'consumes' the end products of the sequence of earlier ones and that the chain of processes begins without material inputs from past cycles. Consumption, rather than being a 'using up' of things is, to an increasing extent, their accumulation and transfer. And the design process, rather than expecting in large part to process fresh material and information, and to

25. WALKER, 1989, pp.68-73.

26. See: Glossary.

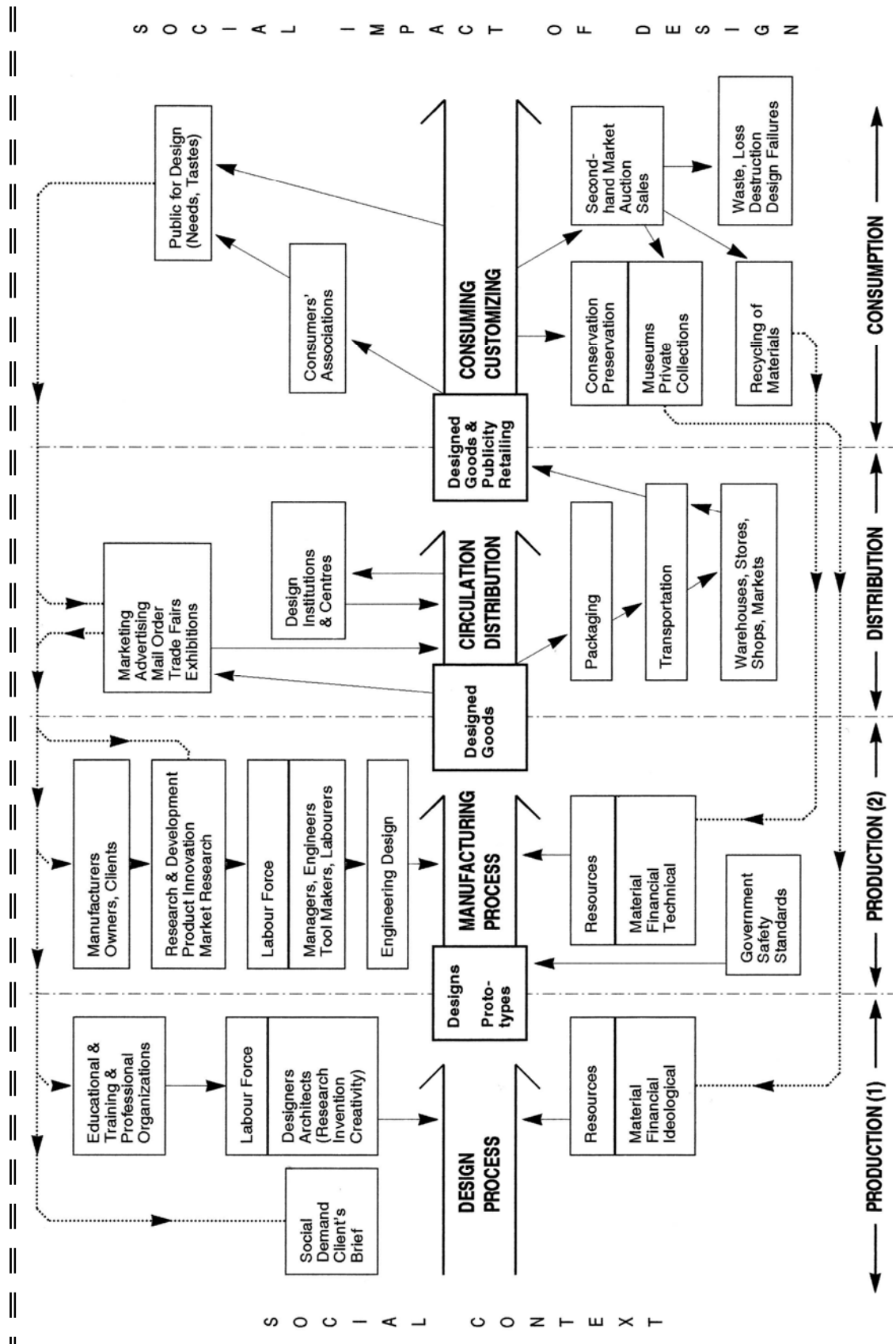


Figure 3.2.7

Design History's Field of Research: Production-consumption model (from Walker, 1989)

develop and specify new techniques, is more and more commonly largely concerned with recycling material and ideas, and with integrating and transforming the increasing complexity of the obsolete.

A parallel to this linearity may be found in the development of hard systems methods. Checkland compares Jenkins (1969) methodology and the RAND Corporation methodology, both of which are of the 'hard' systems variety, with the 'soft' systems methodology developed during the 1970s at Lancaster University.<sup>27</sup> Starting with 'a relatively well-defined problem which the analyst may, to a large extent, take as 'given', once the client requiring help is identified' the two example 'hard' systems methodologies are able to proceed in an ideally linear fashion. Progress is through: analysis of decision-makers' objectives, placing of the system in a hierarchy of systems and its performance specification; the identification and comparison of alternative systems and then the selection of the one which best meets the need and is feasible, or, following analysis, design of the system by quantitative methods, simulation, and optimization; and finally implementation of the designed system. We can see direct parallels with the implied linear rationality of the design process models noted above (Figures 3.2.1-6.) In every case but one the design process follows a general pattern. To summarise, it is deemed to start with a process of identifying a more or less definitive 'brief' which describes specific problems, sets out specific objectives, and/or defines specific performance criteria. This brief, once documented, is in principle the 'given' definition of the design project and is followed through in: the development of design concepts; their visualization, transformation and formative evaluation; the synthesis or selection of an outline solution; its aesthetic and technical development and detailed design and specifi-

27. CHECKLAND, Peter. *Systems Thinking, Systems Practice*. John Wiley, 1981. pp.190-1.



cation to meet an array of resource constraints and regulations; and its implementation through production, installation/distribution, maintenance and summative evaluation.

The parallel is summarised in Figure 3.2.8.

Simple linear model of the design process	Jenkins (1969) example of 'hard' systems methodology	RAND Corporation (1950s) 'hard' systems methodology	Checkland (1981) 'soft' systems methodology
a. Start with a client defined problem which the designer accepts largely as given.	Start: an urge to solve a relatively well-defined problem which the analyst may, to a large extent, take as 'given', one for which the client requiring help is identified.		Start: an urge to bring about improvement in a social system in which there is felt to be an illdefined problem situation.
b. Identify definitive brief, specific problems, objectives, and/or performance criteria.	Analysis by naming the system, its objectives, etc., and its place in a hierarchy of systems.	Analysis by examining the decision-maker's objectives as expressed in the stated need for the required system with specified performance.	Express by examining elements of 'structure' and 'pro-cess' and their mutual relation-ship. Tentative definition of systems relevant to improving the problem situation.
c. Develop design concepts, visualize, transform, and evaluate.	Design the system by quantitative model building and simulation.	Identify alternative systems for meeting the defined need and compare them by modelling using the performance criteria.	Formulate root definitions of relevant systems and build conceptual models of those systems.
d. Synthesize or select outline solution, develop, detail and specify for production.	Optimize the design, using the defined (economic) performance criterion.	Select the alternative which best meets the need and is feasible.	Improve the conceptual models using the formal system model and other system thinking.
e. Design process of the linear systematic type and hard systems approaches know from the start what change is needed.			Compare the conceptual models with 'what is' in the real situation, and use the comparison to define desirable, feasible changes in the real world.
f. Implement design and evaluate product.	Implement the designed system.		Implement the agreed changes.

Figure 3.2.8

The parallel between linear models of the design process, and 'hard' and 'soft' systems methodologies. (Adapted from CHECKLAND, 1981.)

Jane Darke's Kuhnian model of the design process (Figure 3.2.5) exhibits an interesting variation in which the elements of a definitive brief are not made explicit until after a design 'conjecture' has been visualized at which point an iterative process of increasingly detailed evaluation and modification is engaged which 'develops' the initial concept to a satisfactory conclusion. The reversal of logic, represented by replacing the problem-solution formulation with one of conjecture-refutation, parallels the 'soft' systems reversal of 'hard' systems strategy in which

tentative system definition is followed by comparison with the real world and a cycle of better and better 'expressions' and 'improvements'.

Soft systems methodology came about through an attempt to extend, what has come to be known as 'hard', systems analysis, that had proved 'demonstrably successful within its own field' of engineering, to social systems and civilian problems. The methodology very quickly departed from earlier forms, initially for one crucial reason, ' "Hard" systems thinking is goal-directed' and in social systems 'goals are often obscure'.<sup>28</sup> In the context of a 'rationalized' explanation, soft systems methodology was described in a 'chronological ...logical sequence ...most suitable for describing it but which does not have to be followed in using it!' and later it is also described as a methodology which embraces the principle of 'iteration', in the sense of a repeated refining or revising procedure. This, along with the principle of including a dialogical procedure of comparison between conceptual model and actual situation, allows the process to begin with a problematic situation in which there are ill-defined problems, if there are 'problems' at all, rather than with a well-defined problem, and to proceed towards a 'change' in the situation rather than towards a well-understood solution type.

I have already argued that design is characterized by its relevance to epistemologically complex situations in the social construction of material culture, situations in which neither purely technical nor purely artistic treatments are adequate to the production of 'material' objects whether they be things, places, messages or systems. We may expect therefore that Design, as actually practiced, will bear comparison with soft systems methodology rather better than with either hard systems methodology or institutionally prescribed models of the design process.

28. *ibid.* p. 149.

The now somewhat discredited 'design methods movement' of the 1960s arrived at this watershed just at a time when hard systems was becoming established and proving its power. With nowhere to go but into the ghettos of engineering and architecture, where it was still possible to contemplate the reduction of design to essentially technical issues, it floundered. This history is well documented through a well-known series of early design methods conferences and symposia - 'Imperial College London in 1962 (Jones and Thornley, 1963) ...Birmingham in 1966 (Gregory, 1966)' and Portsmouth in 1967. Thirteen years after the critical 1967 symposium Geoffrey Broadbent, in his review of progress in design methods study, recounted that it:

*...had been set up by Tony Ward to include a specific confrontation between those whom he saw as Behaviourists, representing a mechanised, quantified view of design and those (including himself) he saw as Existentialist /Phenomenologists (Former Marxists) concerned, above all, with the 'human-ness' of human beings.<sup>29</sup>*

An inevitable split occurred which effectively ruled out the kind of development that, according to Checkland, occurred in systems analysis in the early 1970s. Consequently a broader view of design process, within a unified discipline of design studies, has not developed out of earlier generalized design methods. The engineering and architecture ghettos still persist, represented by the journal *Design Studies* (UK) and *Design Methods and Theories* (USA), and interest in design modelling has all but disappeared in relation to the broader (and softer) areas of design. The only significant departures from the 'hard' core of design methods, occurred in the mid-1970s when an attempt to 'reduce' design to a principle of universal participation succeeded only in alienating a significant

29. BROADBENT, Geoffrey. 'The Morality of Designing' in JACQUES & POWELL, 1981, p.309.

30. CROSS, Nigel. (Ed.) *Design Participation*. Academy Editions, 1972.

31. JONES, J. Christopher. *Design Methods: Seeds of Human Futures*. Revised Ed. John Wiley & Sons, 1981.

32. JONES, J. Christopher. *Designing Designing*. Architecture Design and Technology Press, 1991 (previously published as *Essays in Design*. John Wiley & Sons, 1984.)

33. Interesting though these developments were - Design Participation reflected the fashionable politics of the time but also seriously investigated opportunities and methods for participative planning and design processes some of which have influenced the work of leading practitioners. However, the ideal of the designer as 'facilitator' has not succeeded in any but the most limited circumstances. Broadbent's criticism of J C Jones' more recent work is thoroughgoing, accusing him also of attempting to 'reduce' design to a game of chance operations, a procedure which is neither original nor adequate. He cites the work of both artists and musicians in the first half of this century - Stravinsky *Poetics of Music* (1942), Han Arp's paper collage *Rectangles arranged according to the laws of chance* (1916), and Marcel Duchamp's Large Glass *The Bride and the Bachelors* (1915-23) - and concludes that although the artist may experiment and please himself in this way, in design 'This whole resort to the random seems to me a profound denial of man's creative spirit..' [ibid. pp.311-12 & 313-25.]

portion of the 'professional' design audience,<sup>30</sup> and J Christopher Jones, one of the founding fathers of design methods and author of a seminal collection of design methods organized into a working manual for designers,<sup>31</sup> switched his interests and approach to one of speculating on and playing with the irrational and chance aspects of design;<sup>32</sup> a move which has brought considerable criticism from those who admired his earlier academic seriousness and sense of responsibility.<sup>33</sup>

Cross (1984) has suggested that the emergence of a mature discipline of design methodology has followed a thematic movement from the 1960s preoccupation with 'prescription of an ideal process' through subsequent concern with 'description of the intrinsic nature of design problems' and 'observation of the reality of design activity' to more recent 'reflection on the fundamental concepts of design'.<sup>34</sup> Rittel considers the interest in methodology to be a sign of crisis in the design field. In his analysis:

*Important design problems have changed their character from almost professional problems to the type of problem where this approach does not seem satisfactory any more, and therefore they have begun to talk about methodology. The main purpose of design methodology seems to be to clarify the nature of the design activity and of the structure of its problems. This role of design methodology seems to me to be much more important than its practical use in dealing with concrete problems.*<sup>35</sup>

The crisis we can see here is in the sharp division that has developed between design practice and design methodology. The kind of venture in which Checkland has been a leading figure, of progressing two fronts through action research, on the one hand, advancing theoretical knowledge in systems analysis, and on the other, successfully intervening in complex real-world situations, is one which has not happened in quite the same way in design methodology. In architecture and engineering the sites of

34. CROSS, Nigel. (ed.) *Developments in Design Methodology*, Wiley, 1984. p.x.

35. RITTEL, Horst W. J. 'Second-generation Design Methods', interviewed by Donald P. GRANT & Jean-Pierre PROTZEN, in CROSS, 1984, pp.317-27.

36. About 10% of articles in *Design Studies* are of pedagogical research, for example, see: DINHAM, s. M. 'Teaching as design: theory, research and implications for design teaching.' pp. 80-8 and, KENDALL, Stephen. 'On design reasoning: lessons from teaching architectural technology.' pp. 89-95, *Design Studies* Vol 10 No 2 (April 1989)

LEE, T. Y. & D. F. Radcliffe, 'Innate design abilities of first year engineering and industrial design students.' *Design Studies* Vol 11 No 2 (April 1990) pp. 96-106.

CROSS, Nigel. 'The nature and nurture of design ability.' *Design Studies* Vol 11 No 3 (July 1990) PP. 127-40.

37. CROSS, 1984, *op cit*.

methodological research of this type have almost exclusively concerned the student designer, and have had overtly pedagogical aims.<sup>36</sup> It may be that design, if it can be methodologically circumscribed, ultimately involves softer than the softest systems thinking, that no amount of subtle reversal in logics will ever be enough, and that the very notion of the path through a design activity as the proper focus of methodological study is mistaken. In 1984 design methodology seemed to Nigel Cross, to be, 'in a much stronger condition to return to its origins, to the prescription of realistic ideals'.<sup>37</sup> Yet this appears to have been over-optimistic. It has its own specialists, few of whom are designers, who follow their researches wherever they may lead which is often a long way from the practices of design. Whilst the practice of Design has arguably shifted its contextual understanding from the socio-cultural and socio-technical towards one at once more pluralistic and accepting of the incommensurable nature of the personal and the social, and more dynamic and holistic - the psycho-ecological, if you will - design methodology lags behind in only recently shifting its epistemological ground from the pseudo-scientific to the socio-cultural and pseudo-linguistic in which notions of social construction (cultural and technological) and communicative practice (phenomenological/hermeneutic praxis) have come to the fore.

### **Design, Post-Design**

These 'paradigmatic' shifts have been interpreted by some as paralleling the post-War onset of post-industrialism and postmodernism, at least across the so-called 'developed' nations of the world. But whether or not we accept such labels, radical shifts in the scope and practice of design

38. DORMER, 1993, p.7.

39. *ibid.* p.12. Dormer cites Raymond Loewy (1893-1986) as a fine example of:

*The first generation of designers who came to maturity in the late 1930s in the USA [and] saw themselves as capable of turning a hand to anything, irrespective of whether it was a casing for a locomotive or a box for an iced cake.*

Penny Sparks notes that during the intense competition of the Depression years 'manufacturers with the aid of advertising agencies' located individuals, who 'although visually trained, also had first-hand knowledge of the commercial world'. A 'fully fledged industrial design profession' emerged within a decade. In addition to Loewy, she lists Walter Dorwin Teague, Norman Bel Geddes, Henry Dreyfuss, Donald Deskey, Russel Wright, John Vassos, Egmont Arens, Lurelle Guild, Joseph Sinel and George Sakier as examples of the new 'consultant' industrial designer.

SPARKE, 1986, pp.94 & 98.

40. James Gardner (1907-95) first set up in independent practice in 1947; until the outbreak of war he had worked as a commercial artist with the London-based Carlton Studios. During World War II he was the Chief Deception Officer responsible for the Invasion Deception Plan. A versatile and prolific independent designer, he is universally regarded as the father of 'modern' exhibition design.

[MacCARTHY, Fiona & Patrick NUTTGENS. *Eye for Industry: Royal Designers for Industry 1936-1986*. Lund Humphries & the Royal Society of Arts, 1986.

have certainly taken place. As Dormer has noted, designers have proved remarkably adaptable to the roles demanded of them in the changing economic and cultural environment.

*Whenever the market place changes - as it has in Europe, for example, from black austerity to green concern - then the designer changes with it. The designer is a chameleon: he or she can, as needed, be a stylist, a corporate image strategist, an ergonomist or an environmentalist.* 38

Having regard for the pseudo-synchrony, which is necessarily created by (or is the subject of) any modelling project, it is as well to point out that what we now regard as the post-War, and also as the post-industrial/postmodern, period coincides with Dormer's dating of the beginnings of 'professionalized' Design in 1945. He makes the general point that, US precursors notwithstanding, it was in the immediate post-War period that the design 'consultant' - initially a generalist - became established.<sup>39</sup> To this we can add that disciplines such as exhibition design and graphic design can identify their separation from the general area of commercial art and their formalization with the same period.<sup>40</sup> Certain aspects of these origins are still with us even if accompanied by more recent and more powerful elements in the constellation of contemporary design. For example, it was James Gardner who transformed the traditional focus, in exhibition design, on display technique into a concern for the visitor's experience. This process was visible even in his first post-War commission, the *Britain Can Make It* exhibition, organized by the Council of Industrial Design (CoID) and held in the still empty galleries of the Victoria and Albert Museum in 1946.<sup>41</sup> Although, at that time, an intuitive response to practical difficulties, the concern has since become a foundational principle supported by systematized methods of research,

p.80. and GARDNER, James. *The Artful Designer: Ideas off the Drawing Board*, 1993, pp.59ff.]

41. *Instead of presenting goods to the eye, as one would in an open market - and that is how exhibitions have evolved - I tucked them round corners, behind screens and in little enclaves, so at first the visitor would see lots of 'décor' but no goods - wouldn't even notice if there were no goods at all. This introduced a surprise element.* [GARDNER, 1993, pp. 129-30.]

42. DORMER, Peter. *The Meanings of Modern Design*. Thames & Hudson, 1990. p.10.

43. see (8) above.

44. WALKER, 1989, p.81. cites Michael Farr's *Design in British Industry. a Mid-Century Survey*. Cambridge University Press, 1955. as a rare example of a synchronic design study.

In, BERGER, Peter. & Thomas Luckmann. *The Social Construction of Reality*. Penguin, 1967, a sociological perspective on the notion of social construction is established.

BIJKER, Weibe E., Thomas P. Hughes & Trevor Pinch. *The Social Construction of Technological Systems*. MIT Press, 1987, reports a number of studies which show the importance of accounting for change phenomena without resorting to teleological devices in historical narrative, and without privileging the human actor in any process of change.

VIRILIO, Paul. [1984] *Lost Dimension*. Trans. Daniel Moshenberg. New York: Semiotext(e), 1991, in talking about the new sense of dimen-

planning and design evaluation. And the grounding of these methods in education, communication and marketing theory (ideology) now far outweighs any moral or pragmatic stance the designer may profess as a question of 'professional' approach.

Dormer has suggested that the designer can be seen as:

*a broker of ideas and values, a middle personage between manufacturers, engineers and applied scientists on the one hand and the consumer on the other.*<sup>42</sup>

(The former group should also include, in a usually less direct relation, artists, curators, critics and educators.) If taken in broader terms, terms which do not privilege the individual 'stylist' in the way that Dormer implies in the thesis of his book, such a proposition can be reflected in a recasting of the Production-consumption model discussed by Walker.<sup>43</sup> In this revision the relatively hard boundaries between the design and manufacturing processes and between the manufacturing and circulation/distribution processes can be softened to account for the smearing of design activity across the three processes. Looser boundaries also more easily accommodate the interpenetration of other elements which set up both the dynamic space of intervals and the different speeds of action which the broader spectrum of, what might be called, the social construction of material culture entails. Following the example of such as Michael Farr, Peter Berger and Thomas Luckmann, Weibe Bijker, Thomas Hughes, and Trevor Pinch, and Paul Virilio, amongst others,<sup>44</sup> the differentiation of a variety of 'actors' in the system of socially constructed material culture is an analytical phase which should present us with a pseudo-synchronic picture that arbitrarily shifts its frame to keep Design at its centre. In this picture, society, consumer society specifically, becomes the surrounding context to which Design relates

sionality brought to the experience of architectural/urban space via the televisual media, demonstrates the pseudo-synchronicity which must characterize such thick description if explanation is not to reduce to the banality of journalistic surface - the zero degree of narrative.

through its diverse manifestations - architecture, systems design, engineering, product design, graphic design, media and advertising, etc. Each site is an interval, a range of possibility, which gains its specific character, form and meaning, from its contingent elements and the speeds of their interactions.



As the next section argues, the museum presents the widest range of phenomena in microcosm and, therefore, represents a site which is ideally suited to the exploration of socially constructed material culture and the problematic of multidimensionality, of complexity, in organizational and design modelling.



### 3.3 Museum

#### Ideology

There is a sense in which the entire history of museum forms and ideologies is present to us in the 1990s. The temple of the muses, the cabinet of curiosities, the freak show, the gallery, the archive, the depository, the research establishment, and the cultural and educational institution all exist today in forms reminiscent of those of the past even if the social forces that now sustain them are quite different.

*...it is a mistake to assume that there is only one form of reality for museums, only one fixed mode of operating ...Museums, in common with all other social institutions, serve many masters, and must play many tunes accordingly.*<sup>1</sup>

Philosophical and religious collections, which were characteristic of the first recorded museums,<sup>2</sup> have their latter day equivalents in University departments<sup>3</sup> and in a wide variety of religious buildings, including cathedrals, monasteries, and temples.<sup>4</sup>

The gentleman's cabinet of curiosities, a small room or specially constructed piece of furniture in which "stuffed animals, botanical rarities, small works of art ... artefacts, and curios" were assembled into dense mixed displays, is often regarded as the precursor of the modern museum.<sup>5</sup> However, the modern equivalent is the most common of all types of 'museum', the personal collection related to family, travels, hobby or obsession. Most people collect something; many collect particular kinds of things with a passion and curiosity that makes the result different in kind to aimless accumulation or utilitarian but excessive hoarding and more than mere assemblages of ornaments.<sup>6</sup>

1. HOOPER-GREENHILL, Eilean. *Museums and the Shaping of Knowledge*. London: Routledge, 1992. p.1.

2. See: RIPLEY, Dillon. *The Sacred Grove*. Simon & Schuster, 1969. pp.24-7, and ALEXANDER, Edward P. *Museums in Motion*. Nashville: American Association for State and Local History, 1979, pp.6-7.

3. Like the original Greek *mou-seion* many of these are collections of material used only in teaching and research, and the emphasis is on the scholarly activity of the community not on the collection, care and display of artefacts. See: LEWIS, Geoffrey. "Museums and their precursors: a brief world survey", p.6, and WARHURST, Alan. "University Museums", p.93, in THOMPSON, John. M. A. (ed.) *Manual of Curatorship*. Butterworth/Museums Association, 2<sup>nd</sup> edn. 1992. pp.5-21. & 93-100.

4. For example, the treasury of St Paul's Cathedral in London, the monuments of the Hoby family chapel Bisham (Berkshire), and paintings and decorative art of the Vatican collections.

5. Alexander, 1979, p.8.

6. PEARCE, S M. *Museums, Objects and Collections: A Cultural Study*. Leicester University Press, 1992. p.49.

7. *ibid.* p.51. Pearce goes on to say that:

*The kind of object collected is not important: what matters is the reframing of the object within the collection, as an act of formal admission from one state to another. In a certain sense, objects have rites of passage as do we, and for them this comes when they enter the classification system, the dividing, comparing and contrasting of whatever kind which for each collection constitute the rules of the game. The nature of the rules are [sic] equally unimportant - they can be rational or idiosyncratic - for all of them truly contribute a transformation, and the resulting collection runs beside the world of everyday life but does not reflect it in a direct way. [p.52.]*

In this notion of collection as "artist's play", essentially an existential and psychological insight, we have the basis of a view of museum process as a creative activity. See below 4.3 for a discussion of this 'museality' in organizations in general.

8. BENNETT, Tony. "The Exhibitionary Complex." *New Formations*. 1988/4, pp. 73-102. In the earlier 19th century, following the lesson of the British Museum, the opening of public museums was being encouraged and traditional popular fairs discouraged:

*...owing to their association with riot, carnival, and, in their side-shows, the display of monstrosities and curiosities which, no longer enjoying elite patronage, were now perceived as impediments to the rationalizing influence of the restructured exhibitionary complex.*

*Collections lend themselves to make-believe and the construction of fantasies. adults who collect teddy bears (and many do) are presumably playing out a dream of golden Edwardian childhood, while those who collect Japanese swords are preoccupied with rather different images.<sup>7</sup>*

The freak show and the collection of natural curiosities, once familiar features of the fairground, and popular spectacles amongst the commercial entertainments that assembled outside the official sites of international expositions or world fairs, remind us that we are drawn to the shocking and the alien and all too easily entertained by our own discomfort and fear.<sup>8</sup> Although the freak show as such is rightly very much out of favour, the modern waxworks, in its more gory and mythical moments, plays on similar responses and remains as popular as ever.<sup>9</sup>

The public gallery (from the Italian *galleria*) persists in two principal forms: the modern art gallery or art museum, and the shopping mall and its antecedents - the department store and the shopping arcade.<sup>10</sup> The spatial archetypes of the art museum owe their origins to the *galleria* (1) the long side-lit room hung with paintings and (2) the enfilade of rooms arranged off a central space which was often top-lit (a feature later extended to all rooms to maximise hanging wall space).<sup>11</sup>

The archive remains an essential modern form that differs from its original only in the technology that has become integral to the process of documentation and retrieval. It also exists in a radically new form, the computer database, a virtual form that relies wholly on the electronic reality of cyberspace and the interface provided by the computer screen and keyboard and the modem.<sup>12</sup>

The depository, as treasury, cellar, granary and warehouse, is perhaps the most ancient of all forms. It provides the model for the great reference and resource

*Yet, by the end of the century, fairs were to be actively promoted as an aid rather than a threat to public order. ... The primary site for this transformation of fairs and the conduct of their publics ... was supplied by the fair zones of the late-nineteenth-century expositions. ... The product of the initiative of popular showmen and private traders eager to exploit the market the expositions supplied, they consisted largely of an ad hoc melange of both new (mechanical rides) and tradition - al popular entertainments (freak shows, etc.) ... [p.86]*

9. For example, London shows such as the London Dungeon, Royal Britain, and the Tower Pageant,

10. MacKEITH, Margaret. *The History and Conservation of Shopping Arcades*. Mansell Publishing, 1986. The renaissance model for the arcade was probably provided by Brunelleschi's Foundling Hospital of 1419 in Florence. The central court with galleried upper floors was a later development of the Italian and French form of apartments above arcaded shops. The original Royal Exchange of 1568 in London and its competitor to the west, the New Exchange of 1609, provided a model for a wide variety of merchant's exchanges in Britain for the next 300 years.

11. See BRAWNE, M. *The Museum Interior*. Thames and Hudson, 1982 And the discussion of the ideal form of a museum in the development of the National Archaeological Museum, Amman, Jordan in BRAWNE, M. *From Idea to Building*. Butterworth Architecture, 1992, pp.174-90.

collections.<sup>13</sup> Today the bulk of most museum collections remains in storage, a fact which is not entirely accounted for by lack of exhibition space.<sup>14</sup> Many collections contain material which, though unsuitable for display, is deliberately acquired to further an encyclopaedic purpose. Such ambitions characterize the museum as depository and survive enshrined in collecting policies of institutions such as the British Museum, and the Natural History Museum.<sup>15</sup> The largest proportion of these vast 'hidden' collections receive only the minimum attention required to ensure their survival - documentation, secure storage, stable environment and periodic inspection.<sup>16</sup>

As in the case of the Royal Institution, systematic study based on the collection of comprehensive material evidence provided a central object to many of the museums that were founded in response to the Enlightenment revision of knowledge.<sup>17</sup> Amongst more recently established museums it is often those whose collections are the most representative of the encyclopaedic ambition that are also the most committedly engaged in or most active in supporting research.<sup>18</sup> Since the 1980s emphasis has shifted from the former to the latter method of pursuing research in British national museums but the image of the museum as research establishment remains a powerful one particularly to the academic community.<sup>19</sup>

The explicitly educational purpose of many museums founded in the 19th century was often combined with aims focussed on national identity and improvement.<sup>20</sup> In many European countries museums of national culture were created whilst in the UK the larger regional museums already housed the collections able to support such a mission and collectively served a similar purpose.<sup>21</sup> The museum as cultural and educational institution now rarely seeks to serve such an explicit nationalistic purpose as

12. The Museum Documentation Association aims:

*to promote excellence in all aspects of documentation by: the development of documentation standards; the provision of encouragement and advice, to increase the pool of documentation knowledge, expertise and resources within the museum community as a whole: and to facilitate best practice, especially in small museums ...*

Museums Association, *Museums Yearbook*, 1993-94, p.279.

The technologies used to achieve these aims are invariably computer-based, and the possibilities they introduce for facilitating direct public access to collection information in exhibitions are being explored, for example: the Micro Gallery in the new Sainsbury wing of the National Gallery in London.

13. HOOPER-GREENHILL, 1992. In Ch.6. "The Repository of the Royal Society" Hooper-Greenhill discusses the Foucauldian notion of the classical episteme in relation to the collecting activities of the Royal Society (founded in 1660). *Resemblance as a primary function of empirical knowledge was now perceived to be muddled, confused and disordered.* [p.134]

Comparison, a methodical ordering observation and measurement of phenomena, was to provide the basis for a reform of knowledge:

*Representation of the empirical world was to be effected by language which bore a transparent relationship to things, At this time, words, rather than representing thought, were understood to represent material things. Thus it was thought that it would be possible to form a 'universal'*

industrial improvement. It is more likely to pursue a popular cultural object, such as the media,<sup>22</sup> or a broader educational mission such as the public understanding of science,<sup>23</sup> or simply to serve as a focus for cultural events.<sup>24</sup>

If we focus on the institution that we now formally identify as the museum, and if each form persists in some more or less expected place, we may also recognize a collectivity of qualities drawn from these forms and also the tensions between them that arise out of their contradictory discourses. We should then be wary of any proposition that appears to synthesize the museum in systemic terms.

Whenever we look at a social institution as complex and as difficult to pin down as the museum perhaps we should recall the arguments Mumford used in *The Conduct of Life* to expose the fallacy of 'systems' - by which he meant primarily philosophical and political systems that are characterized by their prescription of ideology that artificially reduces the complexities and uncertainties of life - and expound the need for "organic syncretism".<sup>25</sup> Alexander described the museum pluralistically:

*...we may think of the museum as collection, the museum as conservation, the museum as research, the museum as exhibition, the museum as interpretation, the museum as cultural centre, and the museum as social instrument.*<sup>26</sup>

and captured in the title of his seminal work - *Museums in Motion* - their purposeful, responsive, and changing nature. Following the developments of the 1980s, both in the field of museum planning, organization and design, and of museology, Alexander's attempt at an encompassing statement may now seem too narrow and orthodox. We may now also think of the museum as enterprise,<sup>27</sup> the museum as development,<sup>28</sup> the museum as media,<sup>29</sup> the museum as event,<sup>30</sup> the museum as disciplinary

*collection of material things that would be identical in classification to the 'universal' language.* [p.145]

The Royal Society became a public institution and its Repository the object of experimental science conceived as a communal pursuit of knowledge following Baconian ideals, and a collection that was to become "a complete system of solid philosophy" ORNSTEIN, M. *The Role of Scientific Societies in the Seventeenth Century Chicago*, 1938, p.109. quoted by Hooper-Greenhill, p.147.

14. On average a little over 65% of space in museums is devoted to permanent and temporary exhibitions, whilst a little less than 15% is devoted to storage.

See: Figure 2.18 in PRINCE, David R. & Bernadette Higgins-McLoughlin. *Museums UK: The Findings of the Museums Data-Base Project*. Museums Association, 1987. pp.43-4.

However, on average only about 20% of collections are on permanent display with 80% in store. See: Figure 2 in LORD, Barry., Gail Dexter LORD & John NICKS. *The Cost of Collecting*. HMSO, 1989. pp.18-20.

Clearly collection items are on average about 15 times more densely packed into storage spaces than into exhibition spaces. The size of this differential is a recent phenomenon. Since the 1960s the proportion of exhibition space devoted to interpretive material and supporting structure has dramatically increased and as a consequence the density of collection material diminished. The change has been most marked in natural history museums where many systematic specimen displays have been

mechanism,<sup>31</sup> the museum as virtual realities<sup>32</sup> and, as if to reflexively invalidate the whole notion of a museum, the museum as ideology.<sup>33</sup> Many of these typifications can be traced back to particular institutions, projects or movements some of which predate Alexander's observations. It is simply that we look at them with eyes conditioned by our changed understandings of the world. If the notion of pluralism seemed quite novel in relation to such institutions as museums in 1979 when the bulk of the museums professional community were still desperately seeking a unifying definition of "museum",<sup>34</sup> and a coordinating national (in some quarters, supranational) cultural policy,<sup>35</sup> fifteen years on, it seems unavoidable. After as many years administration in the UK under a single political party, after economic boom followed by the most severe recession since the 1930s, after the effective removal of philosophical foundations and the working through of many of the implications for praxis (including museum practice), after the general crisis of identity in many of the ex-communist countries of eastern Europe, ex-colonial countries of Africa and East Asia, and the war torn Middle-East... after the possibility of complacency has been replaced by the alternatives of cultural anaesthesia or psychosis, and that of ideological certainty by a profound sense of uncertainty and difference, the need to develop a radical pluralism and to accommodate the incommensurable through open and continuing conversation has become a priority.<sup>36</sup>

Museums have responded to this need. They have changed by moving simultaneously in a variety of directions, without losing their sense of 'community' and, ironically perhaps, without losing the ability to voice common purposes when politically and socially necessary. If there is an ideology of museum it is one that operates on a meta-

replaced by multi-media educational environments in which a combination of models, diorama, graphic communications, audio-visual presentations, and interactive information technology, are the norm and 'real' collection items a rarity.

15. The British Museum's collections have a world-wide scope and once acquired an item is held in perpetuity.

*In most museums there is an assumption that no parts of the collections can be disposed of in the British Museum this assumption is backed by Act of Parliament.*

WILSON, David M. *The British Museum: Purpose and Politics*. Trustees of the British Museum, 1989. p.24.

16. It should be noted however that the first of these requirements, documentation, by which a museum may know (minimally) what it has, where it is, and who owns it, is not fulfilled by every museum. In 1987 the proportion of museums with documentation for over 90% of their collections was relatively small: about half of museums had accession records; about a third had adequate catalogue records; and about a quarter had indexes or some other information retrieval facility. See: Figures: 3.12, 3.13, & 3.14. in PRINCE & HIGGINS-McLOUGHLIN, 1987. pp.70-3.

17. In the UK the British Museum, founded in 1753, is the most famous example. During the 19th century it was split to form separate departments, one of which has since gained some autonomy - the Museum of Mankind (Department of

level, able to survive in the liberal capitalist as easily as in the social democratic, the nationalist or the plutocratic environment. It is an ideology that doesn't appear "closed, dogmatic and inflexible" or as "teleological, 'totalitarian' and metaphysically grounded".<sup>37</sup> It has responded to postmodern critique and been strengthened by it in a surprising way. It has allowed the museum to (re)discover its basic creativity.

*Meanings are not constant, the construction of meaning can always be undertaken again, in new contexts and with new functions. The radical potential of museums lies in precisely this. As long as museums and galleries remain the repositories of artefacts and specimens, new relationships can always be built, new meanings can always be discovered, new interpretations with new relevances can be found, new codes and new rules can be written.*<sup>38</sup>

## Institution

If the designer has been a 'chameleon' in post-War times so too has the museum and specifically the museum curator. The creativity that each has shown in responding to political, economic, cultural and technological change shows certain parallels. Demand for consolidation creates the archivist and connoisseur, for expansion and collection, the planner and entrepreneur, for economic stringency and consumer satisfaction, the business manager and marketing executive, for cultural divergence and democratization, the artist, educator and facilitator. The proposition is that the museum is a model creative organization with as much in common with the design company, the systems consultancy, the university, and the film production company as with the warehouse, the shop, the library, and the cinema. Every output of a museum is the result of creative communicative processes and not merely those of

Ethnography, 1970) - and two others independence - the Natural History Museum (1881) which includes the Geological Museum, and the British Library (of which the British Museum Library was only one of several contributing national libraries, 1973). See: MILLER, Edward. *That Noble- Cabinet: a history of the British Museum*. Ohio University Press, 1974.

18. For example, the National Maritime Museum, founded in 1934, is a designated repository for many forms of maritime archival material such as ships plans. It has *an excellent library, extensive archives, a large collection of prints and historic photographs and considerable reserve collections, [it is] an international centre for historical research, and is the largest and finest institution of its kind anywhere in the world*.

DANIEL, C St J H. "Introduction" in GREENHILL, Basil (Ed.) *The National Maritime Museum*. Philip Wilson, 1982, pp.5-10.]

However, in respect of research other than for exhibition projects and collection management purposes, the museum's staff now concentrates its efforts on providing access to and facilitating the research of visiting scholars, independent programme makers and researchers from industry and government departments rather than on conducting research programmes of their own. (This had already become policy in the year I left the Museum, 1986.)

19. PARR, A. E. *Mostly About Museums*. The American Museum of Natural History, 1959. Parr discusses the

ordering and display. In the dynamic situation in which the museum finds itself, it must continually change, in social and physical terms, in relation to its 'environment', and this defines a wide range of possible organizational arrangements and images whilst requiring that these adapt easily without jeopardizing longer term or central purposes.

Given Checkland's rationale for soft systems methodology, the museum would seem to be an ideal subject for this approach to organizational design - it is a social system that has purposes, a perceived need for change, and represents a problem situation in which many different ways of defining 'problems' coexist and precise outputs are difficult to prescribe.<sup>39</sup> However, it is also true that the procedure of developing a root definition, one that appears relevant in some representational or analogical sense for any specific museum, and of treating this as an hypothesis concerning improvement of the problem situation, raises the issue of what kind of simplification of the situation is acceptable in practice. The myth and the model each have an attenuating function in understanding and praxis.<sup>40</sup> The metaphorical role of any image in initiating the creative process is, in theory, arbitrary and temporary, a jumping off point which does not necessarily need to serve as a reference point, but then there need not be a formal (fixed) reference point at all. The proposition, in soft systems methodology, that a coherent and functional conceptual model should develop with reference to the formal system concept and/or with admired examples, constrains the entire process to one of reinterpretation and simulation, and I doubt that this can be adequate to the situation of multifaceted change, of plural image, such as we find in 'chameleon' organizations such as the museum, the design company and the film production company. Perhaps Mumford's organic syncretism interpreted as

research function of natural history museums before any other. *In relation to research the museum of natural history has a dual set of functions to perform. It serves as an archive for the preservation of the evidence of conclusions already arrived at. It is also expected to form the center of active research towards new conclusions. These dual purposes are not in harmony but in competition, each being a burden upon the other.* [p.10]

At the Natural History Museum in London, long established primarily as a research institution, the public services department, uniquely amongst Britain's national museums, is wholly responsible for the planning and development of exhibitions and the provision of education services. In a quite separate operation ...*behind the scenes scientists work on the 67 million specimens which make up the nation's natural history collections.*

Museums Association, *Museums Yearbook*, 1993-94, pp.152-3.

20. For example, even before Birmingham City Museums and Art Galleries came into existence collections were being assembled to:

*... be the means of educating the tastes of those upon whom the reputation of Birmingham manufactures chiefly depends.*

contemporary source quoted in DAVIES, Stuart, *By the Gains of Industry. Birmingham Museums and Art Gallery 1885-1985* Birmingham Museums and Art Gallery, 1985, p.15.

Following the opening of the gallery the Purchase committee continued to use the limited funds at its disposal:

*to secure such works and Art*

process would come closer to the mark. The problem we might foresee with an iterative process that works at first at high speed and low resolution and later, after comparisons with the real world situation and, in the case of a museum, with institutional expectations, at slower speed and higher resolution, is that the site of the slowing action would inevitably find itself diverging from the dynamic museum/design interval and, therefore, introducing 'adequate' detail to a model no longer based on an appropriate root definition.

## Milieux

When we talk of museum organization it is as well to remember that one third of all museums in the UK have no full-time staff, that the average number of staff (full-time, part-time and volunteer) in a museum is just 20, and that the average number of full-time curatorial staff can be estimated at about 1.25 (6.23% of all museum workers).<sup>41</sup> A very large number (possibly the majority) of museums run with only one qualified curator and in a significant number of these museums that person may be employed and paid by a museum service to which the museum subscribes rather than by the museum itself. The role of enthusiasts and volunteers is therefore of crucial interest in very many museums. The tenuousness of funding arrangements and institutional status are also major concerns. And the looseness and lack of formal power relations in the structure of the workforce, and the impact this may have on the development and use of collections and their subsequent formal organization and care, are by no means unproblematic.

It would be a mistake to believe that museum professionals, even those not involved on a consultancy basis



*Collections as they considered likely to prove valuable for educational purposes and which they were able to obtain at reasonable cost.*

contemporary source, *ibid*, p.29.

21. The Hungarian National Museum is:

*...one of the most remarkable examples... 'founded ... as part of the movement to preserve Hungarian historic traditions and to instil greater appreciation of the Hungarian language and culture'. The architectural style of the National Museum in Helsinki served to emphasize Finnish cultural autonomy during the period of Russian control. The National Museum of Ireland is one amongst a few that celebrates the 'struggle to freedom with the display of personal effects of heroes of revolutions, risings or rebellions'.*

WILSON, Sir David M. "National Museums" in THOMPSON, 1992, pp.82-3.

*It is no accident that England contains no national museum of antiquities, history or natural history in the continental European style: rather, attention was paid to an Empire and further afield. The result is a lack of nationalistic expression in the national museums. It is this, however, that provides such strength to the predominantly regional museums centred on such major centres as Bristol, Leicester and Sheffield. Much of the country's national heritage is in the provinces and this accounts for the richness of many of the provincial collections.*

LEWIS, Geoffrey. "Introduction", *ibid*, p.1.

22. For example, The Museum of the Moving Image, in London and the National Museum of

through a museum service, but employed part or full time by the museum, are automatically able to exercise the expert curatorial skills for which they are ostensibly employed.<sup>42</sup> A hands-on intimacy with large parts of a collection over an extended period of time, intensive and detailed research and documentation activity, the writing of exhibition planning proposals, scripts and outline design briefs/programmes, and the selection of collection material, organization of loans and transport and handling of items for display, these are activities in which the curator will be rarely, if ever, engaged. The curator in such situations is largely involved in a creative organizational function, which involves information broking, training, liaison with governing and funding bodies and statutory authorities, and the direction of technical programmes. What is true in the majority, small, independent, museums is, for a variety of reasons, also true in many larger, publicly run museums. The curator is no longer the privileged, leisurely, connoisseur that many once were but rather has become an administrator, an advocate, and a coordinator, and is increasingly in competition with a variety of others from specialist backgrounds for this executive role in any museum organization.

As a direct result of the Hale Report on training and career structure in museums an independent body, the Museum Training Institute (MTI), was set up in 1989 to develop training standards for all museum workers. Until this point the Museums Diploma, run by the Museums Association, and the Master of Arts degrees offered by the Universities of Leicester and Manchester were the only recognised professional qualifications and were specifically aimed at curators.<sup>43</sup> A number of specialist courses were also available in conservation, and one course at Humberside offered an undergraduate museum design qualification.<sup>44</sup> The first director of the MTI, Simon

Photography, Film and Television in Bradford.

23. COPUS (the Committee for the Public Understanding of Science) is associated with a wide variety of museum-based programmes, and particularly with initiatives taken by the Science Museum in London which include the joint funding with Imperial College London of a Professorship in the public understanding of science, and the running of all-night science events for school parties at the Science Museum. Several independent museums put education at the centre of all that they do, for example, Eureka!, the children's museum in Halifax, Catalyst, the museum of the Chemical Industry in Widnes, and ARC, the Archaeological Resource Centre in York.

24. Although it is quite common for museums to run lecture, concert, and film series as an adjunct to the 'central' public activity of exhibition, some promote a broader cultural programme as their *raison d'être*. Probably the best example of this approach is the Pompidou Centre in Paris. On one of his earliest drawings the architect Richard Rogers called it:

*'a building for culture, information and entertainment' ...By keeping this transparent, flexible, and welcoming space open late into the evening and filling it with life, food, and drink, as well as books, art, film, and lectures, the museum's leaders ...were indeed providing 'entertainment' that matched anything currently available in Paris or perhaps in the world.*

DAVIS, Douglas. *The Museum Transformed*. New York: Abbeville Press, 1990. p.41

Roodhouse, made it clear that the ambition of the new training framework was to facilitate the development of an integrated museum career structure - he saw no reason why, in the future, a museum attendant should not be able to rise to the post of museum director.<sup>45</sup>

The diversification of specialists involved in museum work has changed the nature of museum organization in one particular sense. The reflection of collection structure in functional structure, a one-dimensional construct that previously almost guaranteed the curator a leadership role, has begun to disappear. The Bains Report of 1972 observed that Local Authority museum structure in the 1960s "consisted essentially of a 'vertical' structure of separate professional departments" in this arrangement the majority of collection-based disciplines effectively ran their own show with "no horizontal co-ordination of policymaking or implementation; no 'corporate identity' " (Figure 3.3.1.) Much the same was true in the National Museums (Figure 3.3.2).

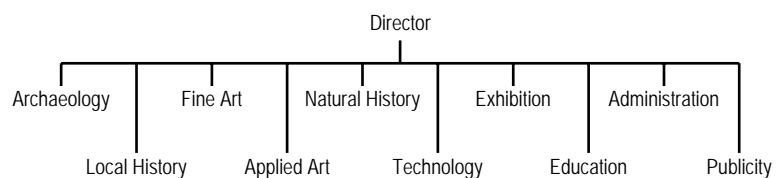


Figure 3.3.1

Local Authority Museum staff structure (adapted from Diamond in THOMPSON, 1992.)

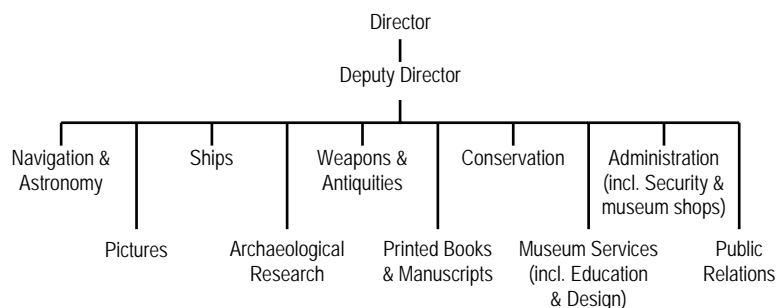


Figure 3.3.2

National Maritime Museum staff structure c1980.

25. MUMFORD, Lewis. *The Conduct of Life*. Martin Secker & Warburg, 1952. p.175-180 & 232-235. Mumford warns against the fallacy of over-simplification that is involved in the very conception and application of a system [p.176] And notes that:

*Actual historic institutions, fortunately, have been modified by anomalies, discrepancies, contradictions, compromises: the older they are, the richer the organic compost ...it is their weakness that is their saving strength.* [p.176-7]

The organic syncretism he promotes requires a balance to be achieved between the scope for human initiative and the principles of 'natural' organization which allow for growth, dynamic responsiveness, and solidarity. This view is based on a reassessment of Romanticism which "sought to undermine the whole mechanical conception of human improvement". [p.233]

26. ALEXANDER, 1979, p.14-5.

27. The Jorvik Viking Centre in York opened in 1984 having organized the archaeological project centred on Coppergate in such a way as make the original excavation a public spectacle. The success of this approach resulted in a purpose-built museum completely enclosing the site and incorporating it as a permanent feature of the exhibition. The exhibition itself pioneered the 'dark ride' concept (an up-market version of the traditional ghost-ride or tunnel-of-love fair-ground attractions) - a method of attracting a large audience, of managing a rapid throughput of visitors, and of providing a high quality, entertaining and educational experience. Through

During the 1980s some authorities adopted the Bains model which created a coordinating head for all 'academic' services (the collection-based departments) and another for 'museum' services (administration, exhibitions, education, security) (Figure 3.3.3.)

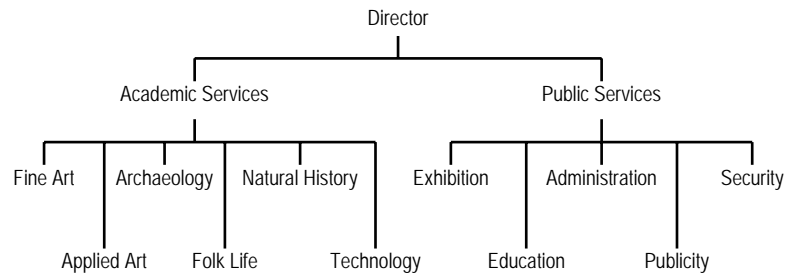


Figure 3.3.3

Post-Bains museum staff structure (adapted from Diamond in THOMPSON,1992.)

Independent museums meanwhile provided another model which has since been adapted by some national museums to suit their size and trustee status. Independent charitable trusts usually associated administration with the director's office and created a single curatorial department on the same level as commercial, finance, and volunteer/project departments each with a head who was part of the policy-making and coordinating team (Figure 3.3.4.)

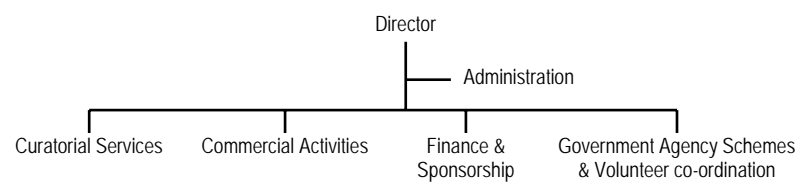


Figure 3.3.4

Charitable trust museum staff structure (adapted from Diamond in THOMPSON, 1992.)

The National Maritime Museum in Greenwich first began radical reorganization in 1984 and by 1987 had developed a

‘enterprise’, (an example of Thatcherite jargon) a combination of business orientation and innovation, the unpromising subject of rescue archaeology was turned into a high-profile and profitable (almost unheard of before the mid-1980s) independent museum.

28. The Manchester Museum of Science and Industry (founded 1983) developed on the site of five semi-derelict buildings, including the world's oldest railway station, near central Manchester - an area in which property and land values were depressed, infrastructure decaying, and businesses long moved to other areas of the city. The museum development has become an attractor for more widespread regeneration.

29. In 1993 the Liverpool Museum became the focus of an international media event: the Jason IV Project involved live satellite link up with an underwater exploration project in the Sea of Cortes off Baja California, Mexico. A succession of school, college and invited audiences were able to talk directly to divers and workers on the project and to see live television pictures of the work. The project was also featured on broadcast television. In the museum exhibitions visitors can also use two-way closed circuit television to observe and quiz conservators and technicians working in the museum's laboratories and studios.

30. The Museum of the Moving Image (1988) introduced into its exhibitions actors whose brief included involving the visitor in

structure in which there was a single collections department, a museum-wide technical services department, a marketing department responsible for all commercial activities, fund-raising and public relations, and an administration department. Added to this was the facility for a special projects group to which staff from anywhere in the museum could be seconded and whose head reported directly to the museum director (Figure 3.3.5.)<sup>46</sup>

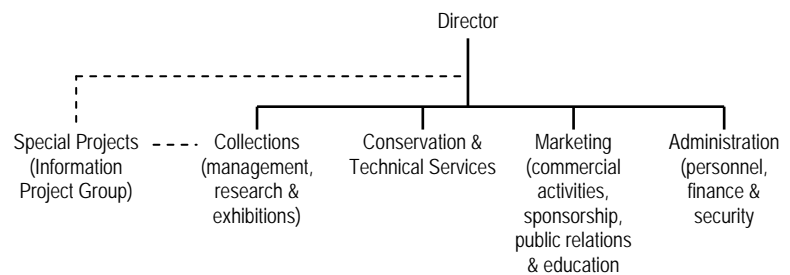


Figure 3.3.5

National Maritime Museum staff structure c1986.

The past 25 years has seen a development and professionalization not only of curatorship, but also of management, education, public relations, marketing, conservation and design. This means that in effect we must consider museum organization as increasingly multidimensional. It is as if ‘curator’ no longer denotes the job title of a particular kind of qualified individual, but rather denotes a professional nexus, one which embraces a specific range of specialist functions at the same time as implying their coordinated expression in praxis. This raises the possibility of structures that are more contingent upon the stage of an institution's development, the nature of its projects, the dominant cultural and political influences, and the different communicative processes that are necessarily emphasized in changing circumstances.

dramatic set pieces. Although the notion of the docent (an educational guide), the costumed interpreter, and other versions of the 'human label' have been used in museums since their beginnings - the British Museum first used guides on its opening to the public in 1759:

*No more than ten tickets were ever to be delivered for each hour of admittance, and parties, limited to five in number, were conducted round each department in turn ...*  
MILLER, Edward. *That Noble Cabinet: A History of the British Museum*. Ohio University Press, 1974. p.63.

"The first true outdoor museum," Skansen (Stockholm) used "costumed craftsmen, musicians, dancers and interpreters" from 1891. ALEXANDER, 1979, pp.10-11.

31. The Foucauldian analysis of the "exhibitionary complex" (Bennett, 1988) and of the museum (Hooper-Greenhill, 1992) both expose the senses in which the exhibition can be understood as a complex of disciplinary technologies that "survey, classify, and control time, space, bodies, and things" (Hooper-Greenhill, p.170.) and as systems that in the same moment allow the public:

*to see and be seen, to survey yet always be under surveillance, the object of an unknown but controlling look: in these ways, as micro-worlds rendered constantly visible to themselves, expositions [and museums and department stores] realized some of the ideals of panopticism in transforming the crowd into a constantly surveyed, self-watching, self-regulating ...consistently orderly public - a society watching over itself.*  
[Bennett, p.81.]

## Manifestations

In the museum, at one and the same site, we encounter designed objects (socially constructed material culture) at all stages of the production-consumption process. Museums are not just where selected objects end up at the end of the process. They are responsible for the design and production of certain kinds of products - buildings, exhibitions, systems (documentation, conservation, loans administration, etc.), information (databases, books, reports, articles and letters), and institutional organization. They are the site of distribution-consumption of. 'experiences' - exhibition visits, audiovisual shows, lectures, events and activities; publicity and promotional material; educational packages and programmes; and souvenirs, reproductions, books, pamphlets, videos, records and posters. And they are involved in selecting, preserving and recycling certain kinds of material culture and associated information in the form of museum collections and archives. This latter process justifies the position given to the museum institution in the Production-consumption model of the design history field but clearly,<sup>47</sup> if our focus rather than being on the object of design history (the ontological focus) was to be on the institution itself as a site of design-based activity (an epistemological focus), the museum would serve as a model of the whole process in microcosm (Figure 3.3.6.)

## Discourses

The Rortian idea of 'conversation' is what might be regarded as a liberal, academic ideal that comes close to realization only in those kinds of practical situations in which practitioners of epistemologically diverse disciplines

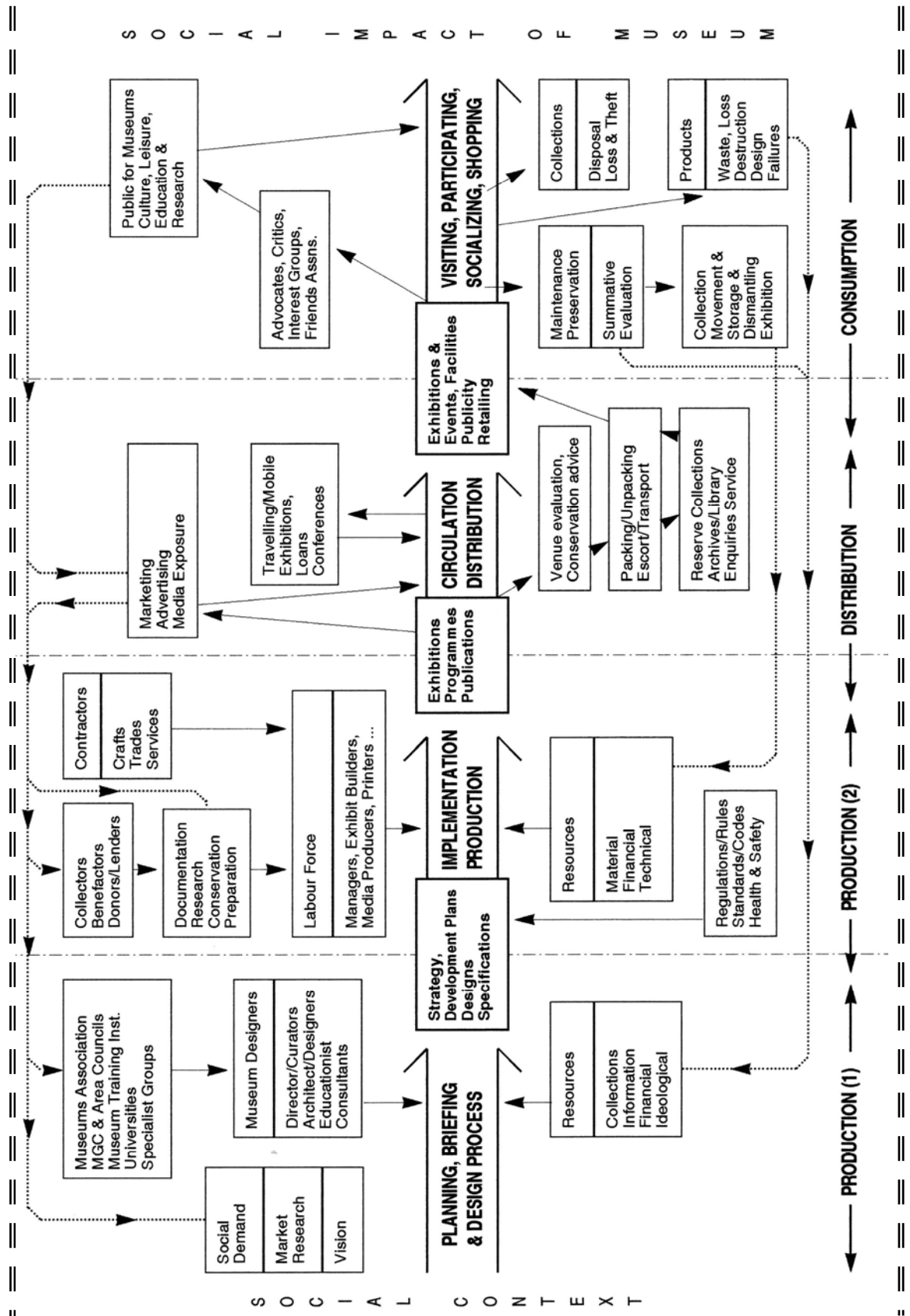


Figure 3.3.6

The field of museum design (developed from the Production-consumption model in Walker, 1989)

32. The theatre of the Blitz Experience and the simulation of Operation Jerico at the Imperial War Museum, the virtual collection of the Micro Gallery at the National Gallery, and Carrier at the Fleet Air Arm Museum which incorporates a simulated helicopter flight to the deck of an aircraft carrier.

33. See: MERRIMAN, Nick. *Beyond the Glass Case*. Leicester University Press, 1991. pp.13-16. The value-laden nature of interpretation is a recent rediscovery in museology. Since the 1920s, when the discipline of historiography was first introduced, historians and archaeologists had broadly accepted that interpretation reflects the social conditions in which it is produced. However, the archaeology which so definitively influenced other areas of material cultural study in the 1960s and 70s was one which attempted:

*to formulate a general cultural science and an objective, value-free approach to the writing of the past* [P.13]

but which failed. Museologists such as Pearce and Hooper-Greenhill, who engaged with structuralism and Foucauldian genealogy, replaced the 'neutral conception' of ideology implicit in earlier thinking with a 'critical conception' that:

*sees ideology as acting to maintain domination through asymmetrical power relations, by representing sectional interests as universal, by denying contradictions, and by naturalising the present.* [P.14]

Museums, through their productions of knowledge and presentations - exhibitions in particular, "select certain material" and structure particular messages

are required to accommodate each other's views and projects in the process of achieving a common (group or social) project. In the museum the exhibition project represents a good example of the requirement for radical multidisciplinarity. To simplify and give an artificially hard edge to the description of the project team, the conservator (as project technician), the designer (as project interpreter), and the curator (as project director) each begin with a professional object - a mode of understanding, specific skills and a strategy for intervening in practical situations - that differs in kind from the those of other two.

The conservator's allegiance is to empirical scientific method coupled with precise manual technique. Museum conservation is like a modern surgical practice in 'treating' its object and progressing technique through: the careful testing of procedures and materials; the development of technologies; and the publication of findings in specialist journals dealing with conservation science and practice.

The designer's allegiance is to creative visual practice in the context of project management and wide ranging communication skills. Design combines, at different moments in the process, the imaginative and expressive dimensions of artistic endeavour and the methodical, analytical and diplomatic dimensions of business practice, treating its object by turns as an exercise in visionary conjecture and as a problem-defining and problem-solving process associated with analyses of a problem situation. Design develops, largely as an incommunicable personal achievement, through the accommodation of contradictory stimuli and experiences, and the repeated risk of trusting to untested responses and the unpredictable procedure of resolving their implications. Traditionally design knowledge is largely tacit and embedded in its visual documents and the evidence of designed objects.

which, in their attenuation of undifferentiated detail and focussing of dominant mythologies, tend to perpetuate the values and power of the established institutions, of industrial culture and politics.

34. Although the rather cumbersome (in English translation) International Council of Museums' definition was promulgated in 1974, the Museums Association in the UK did not agree its universal definition of a museum until ten years later:

*A museum is an institution which collects, documents, preserves, exhibits and interprets material evidence and associated information for the public benefit.*

Museums Association, 1984.

35. In 1977 most British museum curators watched enviously the development of SAMDOK, the Swedish national policy on national heritage, which set an explicit agenda and resolved a wide range of issues concerning the collecting, documentation, and preservation responsibilities of a wide range of institutions including museums. It was only in 1993 that the Department for National Heritage was formed and in 1994 that the intention to review the need for cultural policy was announced. This has been necessitated by the launch of a National Lottery rather than by any transformation in the political climate.

36. The achievement of "solidarity" through the mutual "accommodation" of difference is the meta-ideology of both Bernstein's "new constellation" and Rorty's "liberal ironism".

BERNSTEIN, R. J. *The New Constellation*. Polity Press, 1991.

The curator's allegiances are two-fold: (1) to an academic discipline such as anthropology, history, archaeology, biology, engineering, art history, etc., particularly to an aspect of such a discipline that takes as its epistemological object 'material culture' - the world of 'things' and the documentary evidence we associate with the life and organization of things; and (2) to a professional ethos, which holds that an holistic, socially responsible, historically informed approach is required to the selection, preservation and institutionalized exploitation of material culture, and requires practice to be governed by an ideally universal ethical code that overrides all contingent commercial and political interests.<sup>48</sup>

Although, in practice, individuals normally contend with more than one of these praxio-logics - there is a bit of the conservator and the designer and the curator in almost every museum person - it would be rare indeed (if not psychologically risky) not to have a dominant mode of thinking and acting. Having set up a typology, which to some degree caricatures reality, it may also serve to clarify the nature of some of the discourses that have been elaborated in recent times. In one view, the curator, as a type, has given birth to the conservator and the designer. They practice specialisms which have developed and expanded aspects of curatorship. An alternative view is that the curator has expanded the boundary of the museum to include scientific, managerial and creative practices that previously existed only outside its normal domain. Curatorship has thereby expanded by the accumulation of new practices rather than by a fragmentation and elaboration of an existing practice. Neither point of view is 'wrong' as each reveals a positive discourse that is important to the museum process and to the relationship between the museum and its environment.



RORTY, Richard. *Contingency, Irony, and Solidarity*. Cambridge University Press, 1989.

37. EAGLETON, Terry. *Ideology: an introduction*. Verso, 1991. p.xii.

38. HOOPER-GREENHILL, 1992, p.215. Pearce makes this point in respect of the museum's principal means of embodying and expressing its activity, the exhibition:

*It is the opus which demonstrates the work of collection and curation, and the creation of the lattice of reference and interrelationship, which requires controlled space for its exposition.*

*... the curatorial work of selection and description and the design work of presentation play the crucial creative role. Exhibitions are works of imagination operating within an understood tradition of knowledge and interpretation, and contributing their share towards both the maintenance and the development of this tradition.* [my emphases] PEARCE, 1992, pp. 139 & 141.

39. CHECKLAND, Peter. *Systems Thinking, Systems Practice*. John Wiley, 1981.

*... its aim... was to ascertain to what extent systems concepts could be used in a helpful and coherent way to tackle problems which reside in social systems and are of their nature difficult to define.* [p.150]

*The contents of such systems are so multivarious, and the influences to which they are subject so numerous that the passage of time always modifies the perception of the problem... It became clear that the... research was to be concerned not with problems as such but*

There have been many examples of museum developments, that bear out the nurturing view of curatorship, that started as solitary visionary projects and grew out of the curator's practice in an organic manner.<sup>49</sup> However, at some point such projects generally reach a critical stage of development where the increasing scale of operations demands a dramatic change in approach to finance, functional organization, accommodation, public access, etc., demands a vastly increased interaction with the social, commercial and political environment and the formalization of certain relationships. This might involve for instance meeting the requirements for MGC registration so that the museum may become eligible for various grants, awards, technical support schemes, etc.<sup>50</sup> At such a turning point in a museum development a team of diverse specialists with the right spread of experience gained outside the museum can transform the situation from one of vulnerable stagnation into one of robust dynamism.

Equally there have been many examples of museums that, having reached a kind of maturity, became vulnerable because of their size and complexity. The confident multidisciplinary of which the accumulative view of curatorship speaks may be threatened and disrupted by external forces as easily as by an internal breakdown. At such times the visionary lead of the curator may serve as a re-integrating force and as a seed from which a new dynamism may grow.<sup>51</sup>

The key change of the 1980s in the nature of these curatorial positions is the degree to which they have become characterized by self-aware critical practice. It may no longer be true, as it was into the first half of this century, that the curator is typically an old and highly conservative man trapped in museum service by very low levels of pay

with problem situations in which there are felt to be unstructured problems, ones in which the designation of objectives is itself problematic. [p.155]

40. See above: 3.1 Organization: Simplification and Adequacy, also note 35.

41. Statistics based on "Staffing Profiles - Overview" in PRINCE & HIGGINS-McLOUGHLIN, 1987. pp.78-80. and Figure 4.2. "Proportion of total full-time staff employed in each activity, by type of museum", p.81. For analysis see: Appendix 2a.

42. The primary functions one might expect a curator to perform, the management and research of collections, turn out to be minor or extremely fragmented activities. This is especially the case in smaller museums, but even in the relatively small number of large museums, where specialization has increased, only a minority of curators is concerned with 'core' curatorial work.

*Curators in the smaller museum services all indicated that they had little or no direct contact with collections on a day-to-day basis, or were only able to do so by insisting on setting apart blocks of time for collections work.*

LORD, LORD & NICKS, 1989. p.51.

43. HALE, Prof. Sir John. et al. *Museum Professional Training and Career Structure*. Report by a working Party. Museums & Galleries Commission, 1987. 30% of junior curatorial posts were taken by graduates of these two universities, see: 2.51 p.29.

or else the son or nephew of a curator with the private means to support a life of connoisseurship and academic study and the social status that eases access to public office,<sup>52</sup> but in the sense that the curator has benefitted from an academic higher education, most likely in an older university, has been able to afford the time (probably unpaid) to accumulate practical experience, and has been able to stay in or return to higher education to study for a higher degree, he or she is already a member of an academic and cultural elite, committed to an intellectual and non-industrial working mode, and imbued with the values and ideologies of an educated 'class', regardless of the social milieu of his or her formative years.

An older museology (more properly a 'museography') allowed the curator to concentrate on perfecting methods without questioning the way that the purposes which they served were shaped by the prejudices, preconceptions, values and agendas of the privileged class to which he or she belonged.

The new museology has brought into question formerly foundational notions about curatorial practice - that it could be objective, neutral, value-free, etc. Reflective practice now requires the curator to ask not only questions of *what?* and *how?* and *when?* but of *who for?* and *why?* The new museology is less about "museum methods" and more about "the purposes of museums" and it addresses not just an audience of 'curators', in the older generalist sense of the term, but an audience of 'curatorial' specialists including: director, curator, scholar, conservator, designer, educator and marketer, as well as a wider audience of academics and students of media and cultural studies, sociology and history.<sup>53</sup>

---

44. Conservation has the best pre-entry training provision - several specialist courses in each area: archaeological material, easel paintings, works of art on paper, textiles, social/industrial history, decorative and applied arts, and sculpture.

Exhibition design training began in Hull in 1947, since 1981 this has formally included museum design studies. It remains the only such course in Europe.

45. Speaking at a meeting of the Yorkshire and Humberside Federation of Museums and Art Galleries, October 26, The Old Grammar School, Hull.

46. See: DIAMOND, Michael. "Personnel management" in THOMPSON, 1992, pp. 159-62.

47. See above: 3.2 Design: Epistemological Object, note 25 and Figure 3.2.7.

48. The Museums Association (UK) maintains an ethics committee, in 1993-4 convened by Fellow of the Association David T-D Clarke, and has a published Code of Conduct for Museum Professionals (*Museums Year-book 1993-4*, pp.395 & 398-402.) Professional museum associations in other countries follow broadly similar principles as does the International Council of Museums (ICOM) which is a supranational museums association with membership open to both museums and individual museum professionals.

49. Frank Atkinson and the develop-

ment of the North of England Open Air Museum at Beamish, Co. Durham, is a particularly notable example.

*Frank Atkinson had to develop a completely new kind of folk-life museum, one in which industrial buildings were moved to the museum site. It was to be, he said, 'a museum dealing much more in social history than folk-life'.*

HUDSON, Kenneth. *Museums of Influence*. Cambridge University Press, 1987. p.127.

50. This is a national scheme introduced in 1991 and operated by Area Museum Councils in conjunction with the Museums and Galleries Commission.

51. Between 1990 and 1993 the Natural History Museum in London underwent major restructuring; a corporate identity review, redesign and associated staff training for a new ethos of 'customer care'; a revitalization of exhibitions policy, and the cutting of in-house design capability in favour of the commissioning of 'top' independent design consultancies; and a change in research priorities that involved the loss of fifty scientific curatorial posts. Although the rapid and extensive changes have been a response to a wide range of external pressures - financial, political and social - a clear vision of what a national museum should be in the 1990s has also been brought to the situation by the museum's director, Neal Chalmers. Ref: *The Terracotta Time Machine*, Horizon, BBC2, 1991.

52. As an example of this conservatism which was exemplified in the devotion to connoisseurship E E Lowe, Curator of Leicester Museum, is recorded as having said at a meeting with the Permanent Secretary for the Board of Education in 1919: *when we long for a rare or beautiful or typical thing, we are desiring it for its own sake primarily, and not chiefly because it will educate person or persons unknown.*

*Museums Journal* 19, 1920 pp.123-9 quoted by KAVANAGH, G. "The Museums Profession and the Articulation of Professional Self-consciousness" in KAVANAGH, G. (ed.) *The Museums Profession*. Leicester University Press, 1991. pp.39-55.

In 1946 Parr reflected that:

*The still predominant amateur concept of museum research has had some very unfortunate effects upon the economic and social status of museum workers.*

PARR, A. E. *Mostly About Museums*. The American Museum of Natural History, 1959. p.27.

In 1987 Tait could still write:

*Curators were still being seen, and often seeing themselves, as enlightened dilettantes, experts who did the job for the love of it rather than any career expectation. ...in terms of pay among the professional classes they were one from the bottom, above professional dancers, in 1987.*

TAIT, Simon. *Palaces of Discovery: The Changing World of Britain's Museums*. Quiller Press, 1989. p.159.

53. VERGO, P. (ed.) *The New Museology*. Reaktion Books, 1989. p.3.

## 4.0 Intervals and Excursions

### The Three-Game Plan: a Play of *Différance*

The three rather tenuous discourses opened up in the previous chapter already include their own reliance upon relations with the others. Differences of material focus, of linguistic surface, cannot mask the interfaces they construct and which, as the meeting of boundaries between disciplines, present the possibility of productive dialogue. If museum, design and organization, in reverse or any other order, immediately suggest ways of growing over and around and through each other's constructions it is because each, in its own way, is a voracious conception always looking to account for and to intervene in ever larger realms of experience, in more and more comprehensive collections of phenomena. Perhaps the only counter to this implicit imperialism lies in the play of their implied circularity – a kind of three-game plan of appliance to application or, if one prefers, of analyst to analysand.

Between organization and design one involves a constructive interest in spatialities: the organization of design is immediately a question of a constellation of differently expressed phenomena – physical, social, documentary and paradigmatic.

Between design and museum one is immediately engaged in the problematic of change and of communicative activity – a dynamics of process. The museum process designs – creatively produces – the museum: the design of museum process, therefore, is a design of museum design.

Between museum and organization a context emerges over conceptions of (material) culture and over what it is to sustain something which by definition is concerned with the possibilities of communication and change. The organi-

zation subtracts from the world that constructs the everyday meaning of things, an actor network that nevertheless remains in contact, connected by its reconstructed difference, its power to signify through its play of *différance*: this is a 'museality' – the museality of organization.

## 4.1 Organization of Design

### Foucault's Spatial Framework

In the *Birth of the Clinic* Foucault introduces the archaeology of medical perception with a discussion of the types of spatiality involved in the definition of disease. We learn that, at the first level, the clinician's gaze is directed towards the differentiated minutiae of conditions, symptoms, states, and properties of the diverse visible aspects the patient presents. The configuration of these alone is the material of the proper classification and recognition of a species of disease. And ironically this process of classification "reaches the truth of the disease only by allowing it to win the struggle and to fulfil, in all its phenomena, its true nature".<sup>1</sup> The space here is that of abstracted 'homologies' – a system of signs independent of the individual.

At the second level of spatialization disease is mapped out in the concrete space of the body: "... disease undergoes metastases and metamorphoses" and causes qualitative changes in the organs and tissues of the body which become a recognisable pathology.<sup>2</sup> The practitioner's gaze becomes a highly focussed investigation of the individual.

The third level occupies the social space. At this larger scale "a disease is circumscribed, medically invested, isolated, divided up into closed privileged regions, or distributed throughout cure centres, arranged in the most favourable way".<sup>3</sup> The political and the economic come into play through the power plays of the larger professional group, its immediate administrative relatives and its more distant legislative and cultural counterparts. The hospital becomes an artificial site which alongside other institutions – prison, school, museum, etc. – facilitates the administration of society. By this means medicine is

1. FOUCAULT, Michel.  
[1963] *The Birth of the Clinic*.  
Trans. A M Sheridan. Tavistock,  
1973, p.9.

2. *ibid.* p.10.

3. *ibid.* p.16.

“bound up with the state” in a “general but differentiated policy of assistance”, “a certain supervision ...[is] exercised over the doctors themselves”, and to a large extent “abuses ...[are] prevented and quacks forbidden to practise”.<sup>4</sup>

In the material object, systemic process, and social condition one may perceive a group of epistemological objects that could be just as well conceived for design as for disease, for the museum artefact as for the body: Foucault’s approach to spatiality has resonances. Such ideas of the spaces which different means of defining or understanding occupy create an organizational framework which encompasses at first sight different orders of concepts - objective, systemic, social - which are not in any obvious way logically connected. Each has a rationality that can be characterized in relation to ideas of the epistemological and of the ontological, and in general to philosophical standpoints.

In Foucault’s scheme, relating to disease in the 18th century, the first level points to an overarching scheme of classifications which is free of the subjective both in the picture that it provides of a realm of identifiable diseases and in the process of observing the differentiable specifics of objective phenomena. To be simplistic, this describes an underlying positivist epistemology and realist ontology. And we might ask how such a material objectivity relates to the classification of design phenomena, what proper limits the approach defines.

In the second level the epistemology remains positivistic in tenor in that the system of knowledge ultimately relies upon the assumption of causes and effects at play in creating the observable qualitative changes in the organs and tissues of the body. However, the ontology becomes increasingly nominalist in tenor. Disease is never “confined to a particular course” and the organs of the body

4.        *ibid.* p.19.

provide no observable structure for the disease itself but only of its transformations and transportations: the process of mapping is one of naming the traces of disease rather than of fixing its sites. Such an approach provokes the question of how relations of programme/context to process in design may be delineated and circumscribed.

The third level of spatiality emphasizes another dimension. In the endlessly played out debates that accompany the social regulation of disease there is a constant level of confrontation between the forms of social space presented by its institutions and the orders presented by individual practitioners and their subjects. The always latent potentialities for new configurations to emerge and the radically different views obtained by different participants in the debates, tends to push this third spatiality towards the relativistic end of epistemology whilst preserving something of the ontologically realist perception that certain underlying social forces perpetuate the process of change. In design the political and ethical aspects may be highlighted in such an approach – the twin relations between programme and ideology/Philosophy and between process and ideology/Philosophy.

### **Spatiality in Discourse**

Lefebvre offers a critique of the tendency in philosophy, semiology, deconstruction, and critical theory to move, without regard for logical consistency or apology, from one species of space to another – to move from linguistic space to social space, from cognitive space to physical space, etc. – without proper consideration of the positions, relations and movements that are being invoked or transgressed. In particular he criticizes the readiness to invoke “as the need arises, some such notion as coupure or rupture or break”



and to avoid an account of the gap in terms of a spatial theory in which rhetorical and logical turns (transformations/translations) are explicated.<sup>5</sup>

Physical space, when mathematicized, becomes conceptually and minimally three-dimensional. However inadequate such a schema may be to the accommodation of wider experience, absolute concepts of position, distance, area, direction, volume, etc., proper to an idealized, mathematicized three-dimensional realm, make unambiguous and definitive sense. 'Wider experience' implies, minimally, the playing out of spatial relations in the perceived or imagined passage of time. In this experiential notion of three-dimensional space the measure of all other relations becomes 'speed' – speed of the actions of movement, perception, envisioning, between which three-dimensional space is transformed and all phenomena, defined within its realm, translated from the objective and concrete, to the subjective and sensational, and to the subjective and abstract. That is, a higher dimensionality is the key to accounting for the paradoxical discontinuities of phenomena apparently all 'three-dimensional' in character.

In general one may expect dimensionality to play a crucial role in accounting for the apparent (cognitively real) discontinuities of similar spatial phenomena, regardless of the constitutive dimensions of the spaces. Even the most exotic psycho-social spaces will have one or more dimensions in common with other more or less imaginable realms.

In Foucault's explanation of the space of the body, as contrived by medical practice, certain apparent rifts exist between one realm of the medical gaze and another. However, we are aware that one or more of these modes of perceiving and constituting the body may coexist in discourse and in practice although they may never be

5. LEFEBVRE, Henri.  
[1974/84] *The Production of Space* Trans. Donald Nicholson-Smith. Basil Blackwell, 1991.  
p.5.

collapsed into one another. The physical siting of disease in the material structures of the body may form a constellation of pointers with the systemic, the institutional, and the social explications of disease. Although their incommensurate language prohibits meaningful synthesis a common purpose permits their mutual accommodation.

The body of locations is a physically three-dimensional conception. With the addition of a temporal scale this transforms into a systemic conception of the space of disease. By allowing a multiplication of the body the systemic conception is expanded to a scale of possibilities from two bodies to an entire population: a further dimension is added which transforms the conception into one that is social. And finally, by zeroing the physical space of the body and multiplying the dimensions of social space, the space of disease becomes institutionally contrived and controlled.

The object of knowledge is transformed by stages from the concrete and tangible to the abstract and linguistic, and modes of thought from that immanent in acting to practical and then analytical and abstract reasoning.

We might expect patterns of spatiality such as this one to be repeated in other areas of practice, particularly ones dependent upon the legislation and administration of professional forms of 'gaze' and the interpretation and definition of problematic objects whether they be construed as personal or social, specific or general, in nature. Design is one such area of practice.

### **Spatiality in Design**

Foucault's spatiality of disease, when translated directly to design, becomes confused at levels two and three.

6. *Designing is about planning and making ideas explicit. if the product is to be made to the designer's specifications, then the designer must ensure that the factory has the tools and the intelligence and that each element specified is practicable.*

DORMER, Peter. *Design Since 1945*. Thames & Hudson, 1993. p.9.

7. *... it is convenient to group the work [of designers] into three simple categories, though the distinctions are in no way absolute, nor are they always so described: product design (things), environmental design (places) and communication design (messages).*

POTTER, Norman. *What is a Designer: things.places.messages*. Revised Ed. Hyphen Press, 1980. p.14.

I add to this inventory the concept of 'systems' to accommodate the notion that increasingly designers deal with objects which are interrelated and not in all their aspects tangible.

8. For example, Hugh Aldersey-Williams tried in vain to get straight answers out of Perry King and Santiago Miranda about who did what in their remarkable partnership.

*King and Miranda gently steer conversation away from any investigation of their individual creative characters [p.9] ...The studio itself seems designed to sustain a certain myth regarding the principals' creative process. In the middle of the space, sandwiched between the open studio on one side and the reception and conference areas on the other, is an inner sanctum. It is here,*

Relations between programme/context and process and between both of these and ideology/Philosophy, imply a complex dimensionality which it would be sensible to try to reduce, at least in the first analysis. Following on from the designed object (product), the design specific terms 'programme', 'process' and 'philosophy' suggest that a clearer scheme of spatiality may be possible if four, rather than three, levels are defined. And we may expect that in the analysis of constitutive dimensionality the spaces of design will exhibit transformations that similarly define a constellation of pointers, in this case in design discourse and practice. It will also be argued that the idea of 'representation' or 'social reconstruction' may not be easily separated from that of 'social construction'.

### **Product: the designed object**

In talking about the designed object, generally speaking the focus of attention is on the end product of an invisible process. In design history, as much as in the popular press, there is a long tradition of taking the object at face value.

This has the effect of reducing the topics of conversation to those based on the immanent aspects of the object's materiality and on socio-cultural discourse. In this sphere 'design' is a quality which attaches itself to the products of human forethought in industry,<sup>6</sup> in particular, the manufacture of 'things, places, ...messages' and systems.<sup>7</sup> The option of delving deeper into the nature of the designed object is usually precluded by the equally long tradition on the part of designers of maintaining a fearful silence about the means by which these products actually came into the world.<sup>8</sup> The glossy magazines, with their star profiles and product reviews, rarely do anything to

*behind closed doors, that King and Miranda generate their ideas.*  
... [p.22]

ALDERSEY-WILLIAMS, Hugh.  
*King and Miranda: The Poetry of the Machine*. Fourth Estate, 1991.

9. Two examples from the many hundreds that could have been cited. First from: MELHUIISH, Clare. "Light Snacks", *Design Week*, 3 June 1994, pp.16-7.

*With most architects and designers struggling to do the best they can on minimal budgets, the power of lighting to transform what might otherwise be fairly unexceptional spaces has become all the more important.*

The unwarranted assumptions made in such a statement glosses over the most interesting aspects of such projects: the creativity released by financially (or otherwise) constrained programmes, and the dynamics of a design process that generates richly rewarding results from minimized (in terms of time) and cleverly managed design effort.

Second from: MURRAY, Callum. "Ark de Triomphe", *Designers' Journal* No.78, June 1992. pp.32-8.

*'I'm not quite clear what a trading floor is' he [Ralph Erskine] says, 'but I get the feeling that this is a large space where people are just moved into a fairly anonymous environment.' At his age, [78] he knows no one is going to challenge him is he pretends not to know what a trading floor is.* [p.32]

*Erskine has done all he can to suggest a new approach to working practices. Now it's up*

enlighten us as to the connectedness of the invisibles of design to the visible end product. Almost inevitably, the gloss we are likely to read will be based upon hearsay, post-rationalizations of the most outrageous neatness, marketing circumspection and advertising hype.<sup>9</sup> As a space in which design may be defined, the designed object, or product, presents a paper-thin first level – the three-dimensional materiality of Figure 4.1.1.

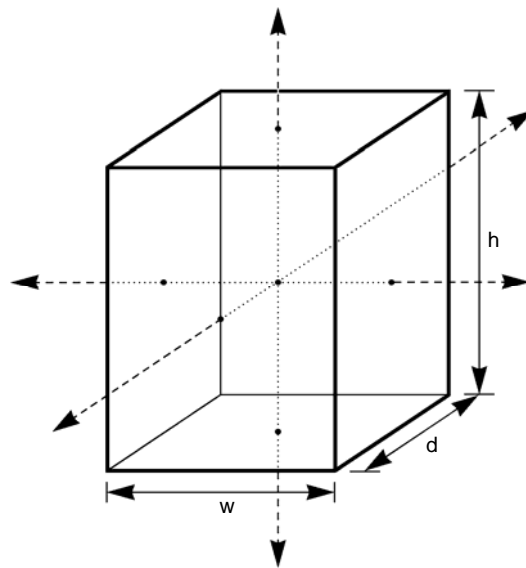


Figure 4.1.1

The 'real' space of the designed object, which may be thought of as a three-dimensional region, defined by the height (h), width (w) and depth (d) of the designed object, within an open and indefinitely differentiable Cartesian space.

However, its gloss is based upon mediated relations between manufacturer and consumer, between product and material culture, and between various interpreters and their audiences. The consumer's gaze and the interpreter's gaze – a gaze continuous with the operation of all the senses – work in consort on the visible surface and physical presence of the object each separating out the aspects of image and materiality of significance to their respective practices – semblance and resemblance, function and evocation, economy and effectiveness, narrative and

to the tenants. 'Dreams are very important for people and for societies'; he explains. 'If architects can find a common dream and make it known, then it would be a very good thing. If they can't, then it will be the same kind of fragmented situation we've got today'. [p.38.]

In this lengthy article (for such a newsy journal) nothing about the extraordinary concept behind this building is challenged. A prime target could have been the process which allowed so much early indulgence in social ideas to have gone untested against the practical situation represented by the location (temporal as well as geographical) of the project. What we are presented with is little more than a letting agent's advertisement. Which, incidentally, failed: two years after the article was written the building remained unlet.

identity, form and signification, pleasure and purpose, etc.

The space here is actual and three-dimensional but passes into the social realm via the cumulative acts of perception and the motions of economic activity. However, the individual consumer plays no part in the orientation of the whole space. Consumer acts of discrimination are statistical, meaningful only as an analysable mass. In this sense, each tiny aspect of the consumer's practice is dissociated from every other to be recombined with those identical to itself in the creation of a system of latent marketing and marketable knowledge. Equally, interpreters' acts of discrimination are symbolic, meaningful only as constructions after the fact in a discourse in which a design determinism holds sway: the object as design may only be realized as a process which has already been played out, which, in Foucault's words, has been allowed to "win the struggle and to fulfil, in all its phenomena, its true nature." When one focusses on the end product that results from implementing the design communicated by the designer's drawings, models, specifications, etc. the designed object is a *fait accompli*.

We may visualize the transformation between the designed object and the 'object as design' as an enfolding of the three-dimensional physical space of the designed object in the extended socio-temporal space described in Figure 4.1.2 which is defined by the dimensions that accommodate, amongst others, the motions of perception and consumption: the dimension of time, in its simplest guise, is linear and directional, and the simplest space of social relations is two-dimensional, that is, planar and differentiable. Only through this higher dimensionality do we gain the space in which to talk about and act upon the material possibilities of the designed object. But this must not be taken to imply that the first level of spatiality in design,

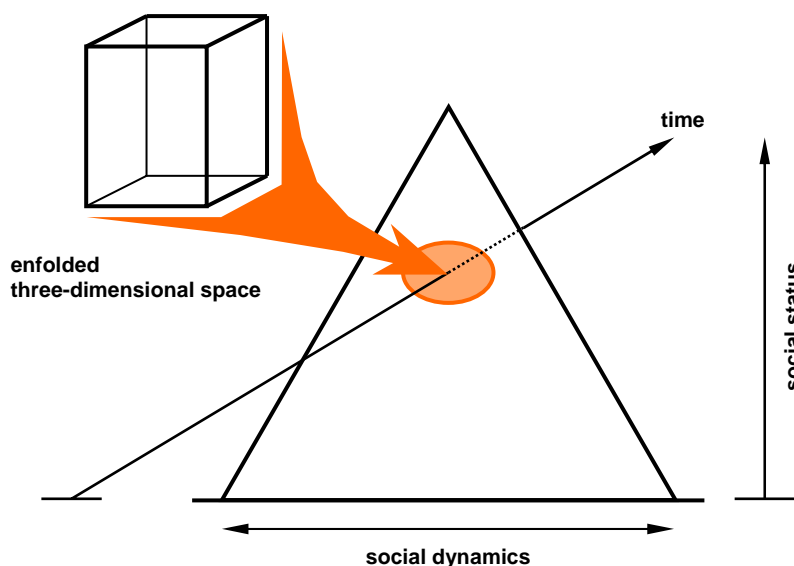


Figure 4.1.2

The 'social' space of the object as design which may be thought of as a two-dimensional region, defined by dynamic and static dimensions of society into which is enfolded the physical space of the object and which, as an activated space, is projected forward in a dimension of time.

10. I cite my own experience of writing for an international English-speaking market. Butterworth-Heinemann (formerly Architectural Press Books) advised me early on in the writing of *Museums and Art Galleries: Design and Development Guide* (1991) to adopt American terminology.

11. *Often a design process ends with the thought "if we had known at the start what we know now we'd never have designed it like this". ... I think of the [design process] as a specially designed 'education'; or 'course'; which one devises, and undertakes, in order to complete the design.*

JONES, J Christopher. *Design Methods: seeds of human futures*. 1980 edition. John Wiley & Sons, 1981. pp.xix-xx. Nigel Cross took this notion further to consider the implications of the idea that

*people differ in the basic cognitive styles that they bring to any learning task.*

CROSS, Nigel. "Styles of learning, designing and computing". *Design Studies*, Vol.6, No.3, July 1985.

that of the individuated 'physical body', is in any way deficient. What it does imply is that the designed object may only be represented or reconstructed through socially mediated actions and therefore is always interpreted.

### Programme: the object of design

The second level in design takes its epistemological status from the notion that a design 'idea', as a pre-visual concept, can be constituted by a system of circumscribing documentary actions. The word 'programme', which is the common American term for the design brief,<sup>10</sup> is a useful one to adopt for its other connotations. There is an educational use of the term 'programme' which implies a course of learning shaped to some extent by the learner. And design has been characterized as a learning process,<sup>11</sup> one which is reinvented in each design situation to meet specific goals,

12. For example, sources which are likely to be familiar to exhibition designers include: Checklists and specimen letters in "Part Three: Essential Information" in ALLWOOD, John & Bryan MONTGOMERY. *Exhibition Planning and Design: A Guide for Exhibitors, Designers and Contractors*. Batsford, 1989. pp. 133-62.

CHAPPELL, David. *Report Writing for Architects* 2nd Edn, Legal Studies & Services Ltd., 1989.

GOSLETT, Dorothy. *The Professional Practice of Design*. Revised Ed. Batsford, 1971.

LYDIATE, Liz. (ed.) *Professional Practice in Design Consultancy*. Design Council, 1992.

13. ALLINSON, Kenneth. *The Wild Card of Design: a perspective on architecture in a project management environment*. Butterworth Architecture, 1993. Although ostensibly concerned with architectural practice Allinson uses ideas of team building and management and organizational dynamics common to all areas of corporate creativity and specifically design activity.

14. For example, the inadequacy of extant documentation encountered by Kenneth Agnew formed a central element in his proposals for a new research culture in design, amongst his recommendations were:

- *Teaching the documentation of the innovation point as a routine of design work in any environment ...*
- *Encouraging designers in academic environments to publish*

goals which generally relate in the first instance to the opening up of creative opportunity and subsequently to closure in the process of visualization and specification. 'Program', in the computing sense, can also mean a protocol, a system of instructions which directs particular kinds of operations. And in Design – the professional practice of design – certain conventions of procedure and behaviour are regulated by more or less common systems of documentation which include: design contracts, project briefs, surveys, project plans and schedules, tendering packages, production contracts, work logs and diaries, formal correspondence, accounts, etc.<sup>12</sup> In the performing arts 'programme' refers to a document setting out a list of features or acts to be presented and the people (performers) participating in the event, perhaps with subsidiary information that establishes narrative, interpretive or circumstantial purpose and the credentials of the company or prestige of the production. And in Design key communications at several points in the performance of the design take the form of formal documents: at the beginning, a credentials presentation, an initial brief and a contract which makes an offer of services and sets out fees; at design concept stage, a presentation that describes the interpretation of the brief, the main features of the design proposal, and the implications of the design for production. 'Programme' may also refer to the performance itself, in the sense that a performance characterized by some feature that gives it a sense of coherence and continuity, such as the presenter in a radio broadcast, is a 'programme'. Similarly, in Design there is a process of lending continuity to the communicative interaction between the client 'group', the design 'team' and the production 'community' which takes the form of an, often rather informal, performative sequence of mutual

or at least deposit in the institution library a (very) short report of the innovation point as a condition of credit for any professional design work.

- Pressing museums, gently, for correspondingly more penetrating curation of products wherever they are exhibited.

- Offering graduate historians related research studentships in design and engineering schools and then interfacing them with enthusiastic designers and technologists...

- Submitting products which have received such study, supported by the research material, for curation in national collections wherever possible.

AGNEW, Kenneth. "The Spitfire: Legend or History? An Argument for a New Research Culture in Design", *Journal of Design History*. Vol.6, No.2, 1993. pp.121-30.

15. The National Art Library at the Victoria and Albert Museum, contains the extant documentary material of most of the leading decorators, applied artists, craftspeople and designers from the period 1850-1950. Archives at the Science Museum, London and its branch museum, the National Railway Museum, York contain vast collections of engineering drawings and associated documentation. The National Maritime Museum, Greenwich, is the national repository for ships plans and the ship models collection and supporting archives contain a wealth of information on admiralty commissions and many other ship buildings. Ironically, the Design Museum in London was set up without permanent collections

understanding, professional trust, working relationship.<sup>13</sup>

Design programme, as the object of design, therefore encompasses a primary space of documentation and an interpretive space of social performance.

In talking about the design programme, generally speaking the focus of attention is on the documentary products continuous with a visible process of design. The participant and the researcher, who are present in the time of the design process, perceive the design programme quite differently to the design historian who is involved with the documentary evidence of a design process which is past. Continuity in the dimension of time enfolds the documentary space of the design programme into its performative social space. The temporal discontinuity which the design historian experiences prevents the realization of design programme proper, what may be reconstructed is limited by the lower dimensionality of the space of the surviving documentary evidence. It is generally an incomplete body of information, it is separated from the context of its production, and therefore it refers to a process which is invisible. This invisibility tends to turn the design historian to the ontological focus, to steer them clear of the more speculative areas grounded in subjectivist interpretation and towards the more 'secure' ground of empirical study.<sup>14</sup> The object, in this ontology, becomes the autographic product, the drawing and the letter 'by the hand of' the designer, and it is assigned a material cultural status that allows it, for instance, to live happily in a museum archive along side the designed object with which it may be associated.<sup>15</sup> To the participant, the programmatic aspects of the design have a performative function, and the focus therefore is an epistemological one. It is not the materiality of the document that counts but its place in a system of communicative acts.



(neither designed objects nor supporting archive material) and with only a library of printed books to support exhibition and research projects.

Therefore, we may picture the design programme as an asymmetrical construction. In the first instance, the documentary space of the autographic product (Figure 4.1.3) is enfolded in the performative social space of the design programme (Figure 4.1.4.)

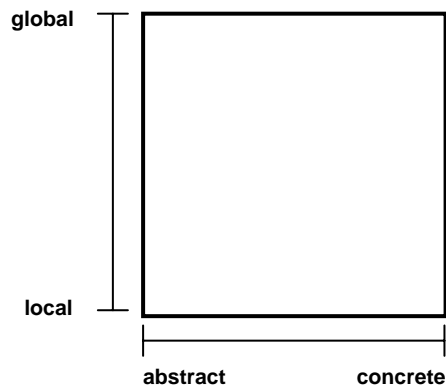


Figure 4.1.3

The 'documentary' space of the autographic product, which may be thought of as a two-dimensional region defined by a formal abstract-concrete dimension that places the type of signifier (semiotic form) and a conceptual local-global dimension that places the scope of signification (content quality).

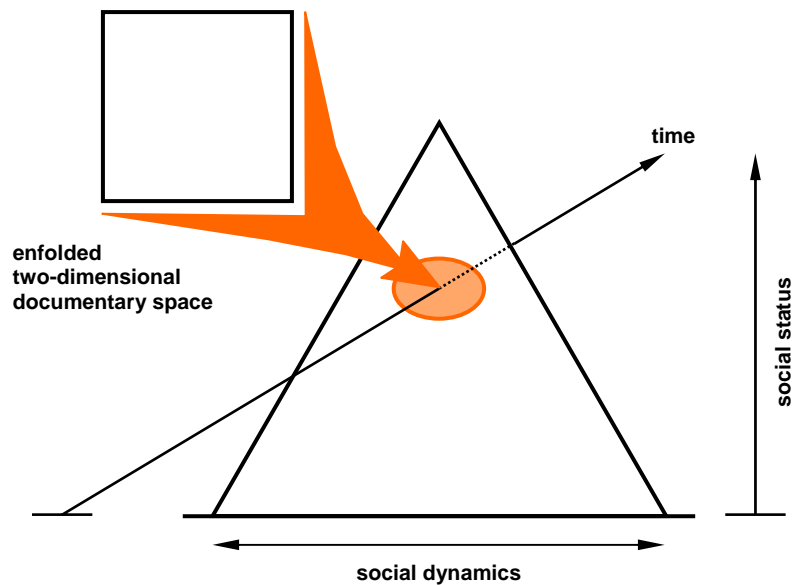


Figure 4.1.4

The performative 'social' space of the design programme which dimensionally identical to the social space of the object as design (see Figure 4.1.2 above.) though, in practice, not differentiated in the same ways.

And in the second instance, the three-dimensional physical space of the autographic product is enfolded in a documentary space thus mirroring the spatiality of the designed object (Figure 4.1.5.)

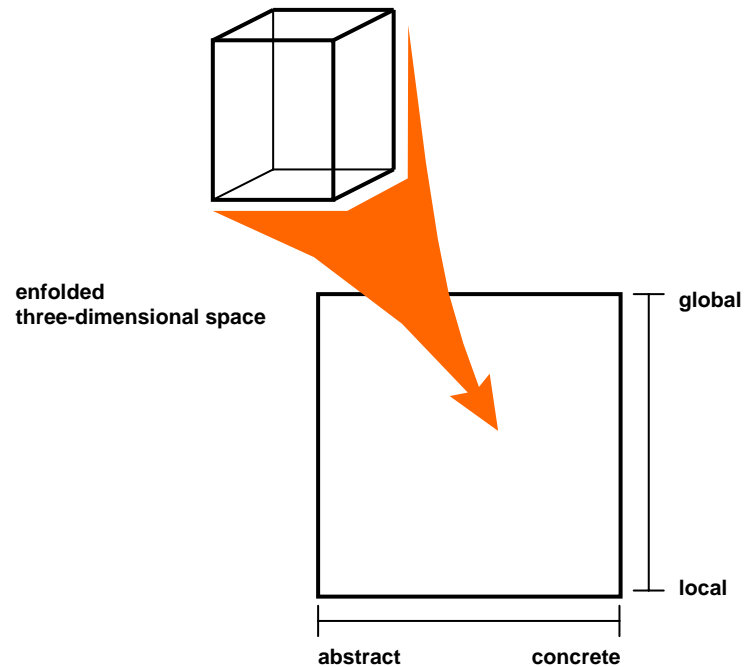


Figure 4.1.5

The 'documentary' space of the autographic product as material cultural object.

In this second construction, however, the performative social space is reduced to a zero point by its dislocation in time. Certainly, it is the autographic product that connects the worlds of the participant in the design situation and the design historian, but, in a reversal of the case with the designed object, on this occasion the higher dimensionality rests not with the design historian's object but with that of the design participant. As before, this does not imply that the object of lower dimensionality is deficient. What it does imply is that it is only in the case of the higher dimensionality that we gain the space in which to talk about and act upon the design programme, and that it may only be represented or reconstructed through socially mediated actions and therefore is always interpreted.

## Design Process

Two alternative foci have been provided in the discourse on design process. The first is the process of designing as experienced. This provides a biographical or ethnographical narrative of the type familiar to the existentialist and to the anthropologist or ethnographer. Its epistemological framework is subjectivist and, depending upon whether it is the existent or the participative researcher doing the talking, ranges from the most liberal, anarchistic and humanist to the most cautious, conservative, phenomenological and interpretive accounts of design process. Such accounts tend to avoid the idea of modelling except *en passant*. The goal of humanist accounts tends to be a, usually utopian, normativity grounded in a critique of industrial, capitalist, Eurocentric, culture.<sup>16</sup> And interpretive accounts tend towards a normalizing pluralism grounded in an assimilative, tolerant, cultural competence; a kind of apolitical eclecticism that skims off the surface of postmodernism but lacks the deeper ironic reflexivity of its sharper forms.<sup>17</sup>

The second focus is on models of the design process that provide ideal visualizations of or prescriptions for the process of designing. The epistemological framework here is objectivist and ranges from the strictly analytic, empiricist and functionalist to the more synthetic, idealist and constructivist models of design process. Such models tend to marginalize the messiness of experience and propose instead a generalization of simple structure, usually of underlying linearity, to which modifying elements may be added to account for the contingencies of practical situations and the imperfections of human activity in the 'real' world.<sup>18</sup>

16. For example:

CHERMAYEFF, Serge & Christopher ALEXANDER. *Community and Privacy*. USA: Doubleday, 1963.

NEUTRA, Richard. *Survival Through Design*. Oxford University Press, 1954.

PAPANEK, Victor. *Design for the Real World*. Thames & Hudson, 1972.

WRIGHT, Frank Lloyd. *The Future of Architecture*. Horizon Press, 1953.

17. For example:

BLAU, Judith R. *Architects and Firms: A Sociological Perspective on Architectural Practice*. MIT, 1984.

CUFF, Dana. *Architecture: The Story of Practice*. MIT, 1991.

SHOSHKES, Ellen. *The Design Process: Case Studies in Project Development*. Architecture Design and Technology Press, 1990.

18. See the examples quoted above in 3.2 Design: Epistemological Object.

Not all theorists have satisfied themselves with the limitations of these alternatives. For example, in a flawed

but nevertheless interesting attempt at behaviourist relativism, Omer Akin developed a version of protocol analysis to look at the behaviour of professional designers in relatively controlled experimental conditions.<sup>19</sup> Although Akin was being too optimistic in hoping to generate:

*(1) a catalogue of operations that can be applied in a task environment, (2) the circumstances under which such applications are made, and (3) the paths developed during the 'search' for a solution.*<sup>20</sup>

He nevertheless reached forward-pointing conclusions. From the evidence of protocol analysis he was able to make observations that contradict the familiar simple linear models of design process and specifically that proposed by Jones (1963): 'Analysis' it turns out "is part of virtually all phases of design";<sup>21</sup> and what he calls the 'search process' may start "from any point in the problem space".<sup>22</sup> Other observations included: the fact that no single issue occupied the designer's attention for very long; that the focus of attention at any one time was largely dependent upon the material of the design, initially programme documentation and, later, increasingly, the stimulus to thinking provided by design drawings, models, diagrams etc; and that very regularly (in the four-hour experimental situation, an average of every 14 minutes) the attention of the designer opens out to undertake an evaluation of the success of the process to date. What we learn from efforts such as Akins' is that so-called 'intuitive' processes hold a key to understanding human designing behaviour, that the range of techniques in which the designer has competence will be brought to bear in a design situation in complex and messy ways, ways that follow practical reasoning discontinuously and rely just as heavily on the stimulus of the work in progress, and sometimes take irrational leaps that can only be justified by the results they produce.

19. AKIN, Omer. "An Exploration of the Design Process" in CROSS, Nigel (Ed.) *Developments in Design Methodology*. John Wiley, 1984. pp.189-207.

20. *ibid.* pp.191-2.

21. *ibid.* p.205.

22. *ibid.*

The only seemingly contradictory conclusion Akin suggests is that “The process of design is primarily a top-down, breadth-first process”.<sup>23</sup> To impose such an interpretation requires too much confidence in the directionality of the specific protocol analysed. The implication that different aspects of the design activity are hierarchically dependent on one another attempts to generalize on the basis of theoretically unsound assumptions. One cannot assume that dimensions of freedom in the design process that are less frequently explored than others are therefore secondary in importance. One could argue that the moments, however infrequent, in which bottom-up detail-first possibilities are explored are in fact the primary moments, the moments that give the design process its defining characteristics, the moments which clearly separate strategies which are first and foremost problem-solving strategies from those which leave open the question of whether the task in design is of exploring creative opportunities, opening up the possibilities of change, or of contriving accommodating coincidences between problem and solution definitions.

To picture the design process in such a way as to accommodate the freedom of movement revealed by Akin’s protocol analysis at the same time as avoiding the trap of crystallizing too solidly synchronic ‘states’ of the problem-solution complex requires that an open space be visualized that may be blurred across a slice of time. In retrospect we do reconstruct, quite successfully, stages in the process of arriving at a design. The mistake is to believe that these can be characterized as actually synchronic. The speed of action in design varies across the process in relation to the information available to be acted upon. In this respect *différance* in design is no different to that in language. Where Akin states that: “Attention also seems to depend on the amount

23. *ibid.* p.206.

of information gathered about certain issues at that point in time” he is rather clumsily admitting an instance of the general point about speed of action. What he fails to recognize is that slow action, action that encounters the local and the detailed, can also occur in the earlier moments of the design process as easily as in later ones such as, in his own example, when “the overall context of the design is adequately understood”. The picture we settle on must be able to encompass the moment of the de-differentiation of a complex programme at an early stage in the design process as easily as the moment which loosens up a design that has developed an inhibiting rigidity at a later stage.

Minimally three dimensions are necessary to provide such a picture (Figure 4.1.6.).

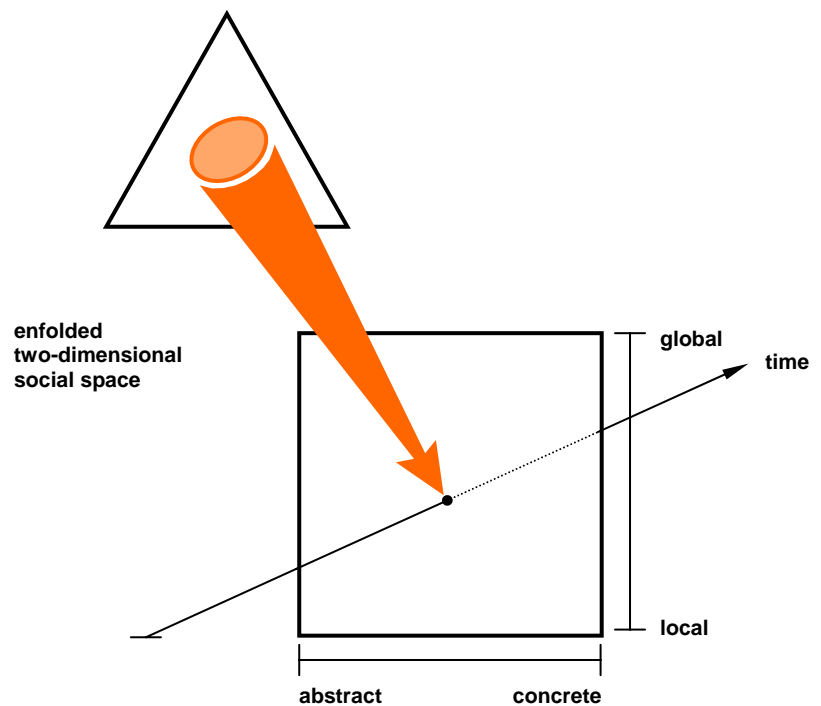


Figure 4.1.6

The ‘pseudo-synchronic’ space of the design process, which may be thought of as a two-dimensional region defined by an abstract-concrete dimension that places design technique in terms of its quality of form and a local-global dimension that places the scope of attention in terms of content quality, which is projected forward in a dimension of time.

24. This general comment is not untypical:

*Designers themselves have ideas about what is involved in the design process. These views are subjective - often ideological, and sometimes idiosyncratic ...*[p.223, my emphasis] THOMAS, John C. & John M Carroll "The Psychological Study of Design", in CROSS, Nigel (ed.) *Developments in Design Methodology*. John Wiley, 1984. pp.221-35.

In trying to explain (or perhaps avoid explaining) an apparently capricious but actually essential and distinguishing design feature of the otherwise very 'formal' *Concept* range of tableware, the swan-shaped knob of the tea pot, Martin Hunt, the designer admitted to nothing but "post-rationalisations".

*I rationalise it by comparing the curves to the ripple formed by a pebble in a pond, and all those post-rationalisations did seem to fit - there is a sort of logic to the swan.* [p.32]

WALKER, Susannah. *Queensbury Hunt: Creativity and Industry*. Fourth Estate, 1992.

25. *Professional architects not only bring conviction to design, but in attempting to manage the uncertainties of practice, they establish priorities on the basis of conviction. Convictions of practice, however, differ from convictions of design in that the former are more pragmatic, rooted in the economic realities as well as the social relations of the firm.* [BLAU, 1984, p.15.].

However, it bears a certain symmetrical relation to the performative social space of the design programme. The two-dimensional space of the autographic product (Figure 4.1.3 above) is stretched out on a time line and into this is enfolded the performative social space of design practice.

In this construction the three-dimensional physical space of the designed object is projected as a zero point: during the design process it clearly lies in the future, that is, it is enfolded, in a virtual sense, at a point along the time line which the design process has yet to reach. This is its dislocation in time. Therefore, once again it is the autographic product that connects the worlds of the participant in the design situation and of the design historian, and, in symmetry with the case of the design programme, the higher dimensionality rests not with the design historian's object but with that of the design participant. As before, this location of higher dimensionality implies that the participant gains the space in which to talk about and act upon the design process and that it may only be represented or reconstructed through socially mediated actions and therefore is always interpreted.

## Design Philosophy

Many researchers have observed that designers generally have implicit ideas about the underlying rationale of design activity which may or may not be made explicit.<sup>24</sup> Those designers whose primary contact is with other designers in a team are likely to express the values and beliefs that they hold, if at all, as a component of the ideological and political negotiation of programmatic space;<sup>25</sup> and those who write about what they do and whose contacts perhaps include opinion makers and policy makers as well as clients

26. For example:

OLINS, Wally. *Corporate Identity: Making business strategy visible through design*. Thames and Hudson, 1989.

*... identity management in major corporations must be the job of the Chief Executive or senior board member, supported by an in-house team and where appropriate by outside consultants.* [p.9 my emphasis]

By its erudition and powerful rhetoric, the book in effect goes on to make the case that nothing is more important than the role of design in corporate identity and that expert independent intervention produces the best results. Olins has proved himself one of the great shapers of this high-profile socially constructed object of design:

*Wally Olins is Co-founder and Chairman of Wolff-Olins – 'the doyen of the corporate identity business' (The Observer). He is Visiting Professor at the Management School, Imperial College of Science & Technology, London and Visiting Lecturer on Design Management at the London Business School. He is also a trustee of the Design Museum.* [Flyleaf notes]

27. Canadian museum and exhibition designers such as Jerry Krause at the Ontario Science Centre, Jacques Guillon and associates Laurent Marquart and Morely Smith in Montreal, Rudy Kovach, Gordon Robinson, Dick Lott and Bill McLennan associated with the Museum of Anthropology, University of British Columbia, Amy Forman and the Royal Ontario Museum's Communi-

are likely to broaden the scope of this rhetorical function to the social space of an entire field of design.<sup>26</sup> In both cases one can see the designer attempting to play a role in shaping the context of design. In the former case the shaping activity has a local focus in the latter it expands and occasionally may be global in intent.

In the UK, and to a large extent in North America, it tends to be the case that designers direct their statements about the nature and practice of design to the furtherance of the institution of Design rather than to the extension of knowledge about design phenomena. This orientation is perhaps a consequence of educational background: traditionally design education is primarily concerned with learning to design and, only as an adjunct to this, with learning about design. In mainland Europe traditions vary, but an extended education and training that encompasses the humanities, arts and technology, and culminates in an architectural qualification is more common: British architectural education, at seven years, is one of the shortest.

British designers, other than a minority of architects, typically know little of Philosophy, have little time and a relatively poor vocabulary for theoretical debate, and have difficulty in relating design to other aspects of social, historical and cultural experience. But, and this is a big 'but', they are respected around the world as effective practitioners. For example, in the past 20 years the work of British exhibition designers has had a greater influence than that of any other group<sup>27</sup> and currently they tend to attract a higher proportion of international work than those of any other nation.<sup>28</sup>

This is not to say that design philosophy, design ideology, is unimportant, quite the contrary. Whether one focusses on theory specific to the design process in hand, that is, on 'rationale', or on theory providing a set of under-



cation Design Team, and David Youngson, Louise St. Pierre and Celina Ducceschi at the Vancouver Science World British Columbia made an international impact in the early and mid-1980's. However, the work of James Gardner, Margaret Hall and Robin Wade was already well known by this time through such high profile projects as Pilkington Glass Museum (Gardner, 1964), Evluon (Gardner, 1975) Tutankhamun (Hall, 1972), Coalbrookdale Museum of Iron and Furnace (Wade, 1979) Throughout the 1980's a wealth of innovative work came from the studios of several companies including Furneaux-Stewart and Gardiner & Torne, and since the mid-1980s from: Brennan & Whalley, Compleat Works, Event Communications, Haley-Sharpe, Hall & Redman, Heritage Projects, Imagination, Met Studios, Neal Potter, and many others.

28. Event Communications, Imagination, Met Studios, Neal Potter and John Sunderland amongst others have been reported in *Design Week* as winning international work on a regular basis.

29. The term was first coined by C S Pierce in 1878: he defined a theory of meaning: 'Consider what effects, which might conceivably have practical bearings, we conceive the object of our conception to have. Then our conception of these effects is the whole of our conception of the object.' The term was soon borrowed by William James, F C S Schiller, and John Dewey, who all in their different ways made pragmatism a theory of truth.

pinning ideas and beliefs, that is, on 'general theory', guiding principles may be discerned in such utterances as are made by designers. And one must also respect the tradition of pragmatism in design in which there is a tacit belief that the work will speak for itself through its physical and social impact, that 'words' are to a large extent superfluous, that the interpretations put upon design by theorists, historians and critics, even if necessary to the cultural and economic spheres of practice, are secondary to the visual, formal and socially active communication mediated by design itself. This pragmatism is itself ideological and has a Philosophical pedigree.<sup>29</sup> Whilst respecting the underlying suspicion of logocentric culture apparent in pragmatism of this sort, one must also note that the invisibility of much of Design is cause for suspicion from other quarters.<sup>30</sup> Although there is nothing mysterious about design, it is a basic human ability – some would say, along with language, it is the characteristic trait of the human<sup>31</sup> – Design (with a capital 'D') is quite regularly the subject of obfuscation particularly in the theory-laden texts of certain architectural journals: translation from Italian or German does not help, but even the *Architectural Review*, *AA Files*, and *Architectural Design* are not immune. Not only do we consciously and purposefully shape the environment around us, we use the process and the products of the process to embody and transmit systems of meanings and values.<sup>32</sup> If design philosophy has a space, therefore, it is as a bridge between the language of design discourse and the process of design, a bridge which refuses to separate off, as a foreign land, the institutionalized zone of Design.

To picture the space of design philosophy two types of space must be linked: (1) a social space of design discourse which accommodates essentially a pragmatic conception of communicative activity (Figure 4.1.7),

FLEW, Antony. (Consultant ed.) *A Dictionary of Philosophy*. Pan Books, 1979. p.284.

*Pragmatism represents a perfectly familiar attitude in philosophy, the empiricist attitude, but ... in both a more radical and in a less objectionable form that it has ever yet assumed. ... It means the open air and possibilities of nature, as against dogma, artificiality, and the pretence of finality of truth.*

JAMES, William. [1907] *Pragmatism*. Edited by Bruce Kuklick. Indianapolis: Hackett Publishing, 1981. p.28.

*Ideas become true just so far as they help us to get into satisfactory relations with other parts of our experience ... This is the 'instrumental' view of truth.* [ibid. p.30]

More recently Richard Rorty has considered the implications of pragmatism for a post-Philosophical culture:

*... in the process of playing vocabularies and cultures off against each other, we produce new and better ways of talking and acting - not better by reference to a previously known standard, but just better in the sense that they come to seem better than their predecessors.*

RORTY, Richard. [1982] *Consequences of Pragmatism*. Harvester Wheatsheaf, 1991. p.xxxvii.

*...professionalized philosophy may or may not join transcendentalist culture, but ...it should not try to beat it.*

[ibid. p.69.1]

In comparing the recent writings of Ian Richie, the British hi-tech (late modern in Jencks' terms) architect, and Bernard Tschumi, the European, deconstructivist (in Jencks' terms, postmodern) architect, Richard Weston had this to say:

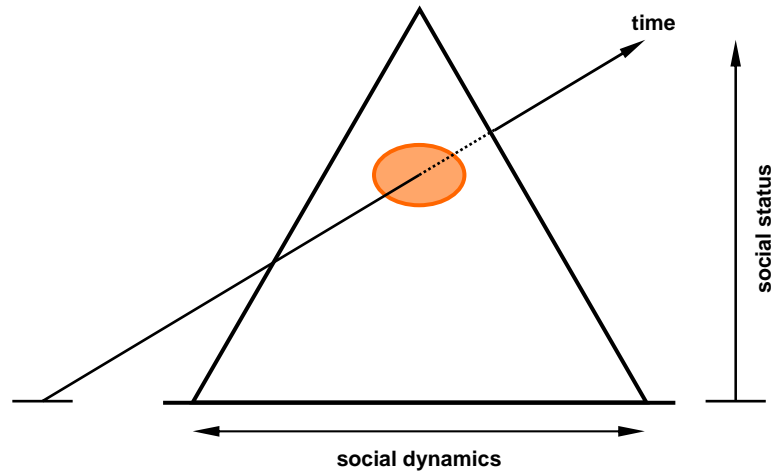


Figure 4.1.7

The 'social' space of design ideology becomes dimensionally identical to the social spaces of the object as design and of the design programme (see Figures 4.1.2 & 4.1.4 above) when given a dimension of time in which to play out its differences in communicative activity, although, in practice, the resulting space will not be differentiated in the same ways as either of these models.

and; (2) a paradigmatic space of design ideology of the sort made familiar by Burrell and Morgan (See Figure 2.4.3). In the context of design discourse paradigmatic possibilities are played out in ideologically committed communicative activity which means that a dimension of time must be added to the paradigmatic model (Figure 4.1.8).

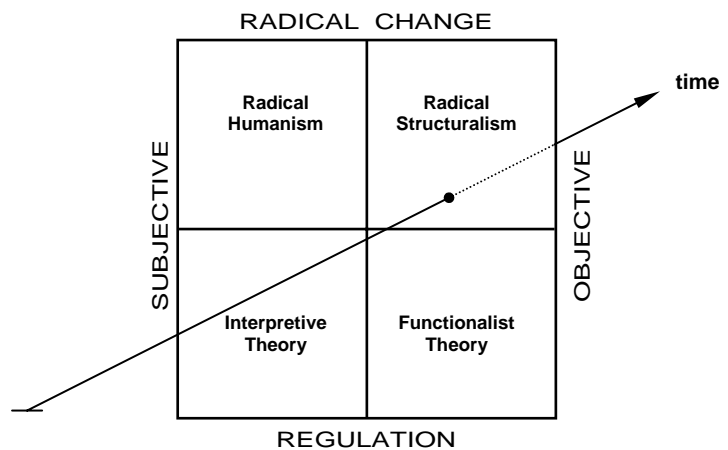


Figure 4.1.8

The 'paradigmatic' space of design ideology (see: Figure 2.4.3.) becomes a performative 'discursive' space when given a dimension of time in which to play out its differences in communicative activity.

*Richie ...is a natural designer more at home with crafting materials than words. He has much to say ...but his writing is less elegant than his projects and is rooted in that empirical Anglo-Saxon tradition to which theorising such as Tschumi's is alien.*

Weston himself a British architect, writer, and teacher, and typically modern and pragmatic in outlook, concludes:

*Tschumi impresses with his erudition but leaves me unmoved, whereas Richie excites.*

WESTON, Richard. "Theory and practice as the century closes" (Book reviews of: TSCHUMI, Bernard. *Architecture and Disjunction*. MIT, 1994. and RICHIE, Ian. *(Well) Connected Architecture*. Academy, 1994.), *The Architects' Journal*, 27 July 1994, p.50.

30. This example is from a former University Vice Chancellor, and at the time of writing the President of the Design Industries Association who admitted to not being and never having been a designer and expressed the desire "to redefine design and design education", as best one can tell, as an academic, technically oriented, general education.

*... being a widely spread mixture of other disciplines, design in its verb form appears marginal or superficial when compared with the main subject disciplines which are focused, coherent, lead to degrees and are supported by considerable bodies of research. The phrase 'Jack-of-all-trades, master of none' fits design like a glove. Moreover, as with drama, art and architecture, the inspirational character of design is difficult to measure or examine. In its hand-waving form, it looks*

In this we can see the pragmatic aspect as a resort which is particularly of relevance to an instrumentalized paradigmatic field. In this sense, the social space of design ideology may take one of two alternative relations to the whole in a symmetrical construction. (1) In the case of ideologically committed communicative action it may be enfolded in the paradigmatic space at the point of action on the time line and be carried forward as the actor's socially defined identity (Figure 4.1.9.)

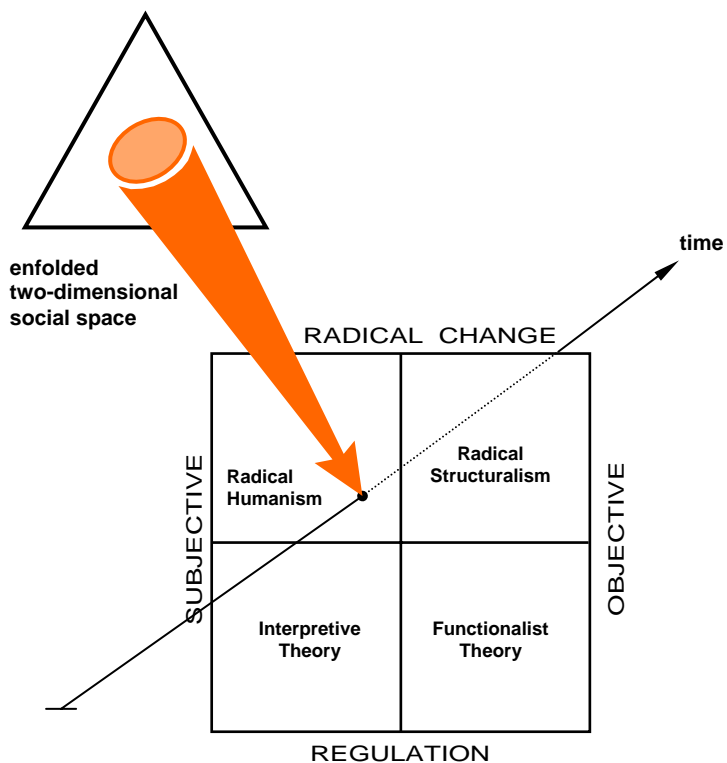


Figure 4.1.9

The 'paradigmatic' space of ideologically committed communicative action: a performative 'discursive' space in which is enfolded a social space of design ideology.

(2) In pragmatic communicative action, on the other hand, the social space is open and active; the time line carries it forward along with an enfolded paradigmatic space in which a series of traces may be inscribed as the (retrospective) defining characteristics of any communicative action (Figure 4.1.10.)

*a soft option. For all these reasons and more, design is not a regular, respectable discipline of higher education.*

HILLS, Sir Graham. "A renaissance in design education" in MYERSON, Jeremy. (ed.) *Design Renaissance* Selected papers from the International Design Congress, Glasgow, 1993. Open Eye/CSD, 1994. pp.87-93.

31. See 2.3, Note 6.

32. See 2.3, Note 12.

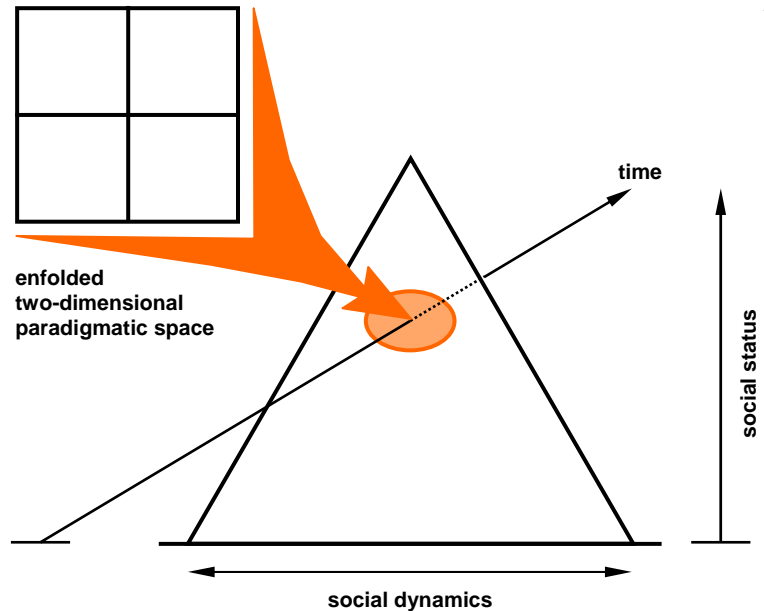


Figure 4.1.10

The 'social' space of pragmatic communicative action: a performative social space in which is enfolded a paradigmatic space of design ideology.

In this construction neither the three-dimensional physical space of the designed object nor the two-dimensional documentary space of the autographic product are located. Their dislocation is partly a matter of absolute dimensionality – no overlap occurs between, for example, three-dimensional physical space and two-dimensional paradigmatic space – and partly a matter of the process of generalizing schemata at this stage in the project, a process which tends to mask the potential for a bridging between incommensurate spaces that may be achieved by defining a common space of interpretation, practical discourse, of communicative action in general. However, certain written statements by the hand of the designer, as well as those composed by the journalist, critic or historian, that quote the designer, do concern design philosophy. Indeed, outside of a direct experience of the practical context of any ideological mediation, the text, whether visionary or revisionary in intent, is the principal source of information upon which to base the study of design philosophy.

In the case of the text, a spatial relationship, which parallels that between the three-dimensional physical space of the autographic product and its documentary space in forming an object for the design historian (see Figure 4.1.5), can be defined which encompasses the text as an object of study. The social space of pragmatic communicative activity and/or the paradigmatic space of ideologically committed communicative activity are enfolded in the documentary space of the text (Figure 4.1.11.)

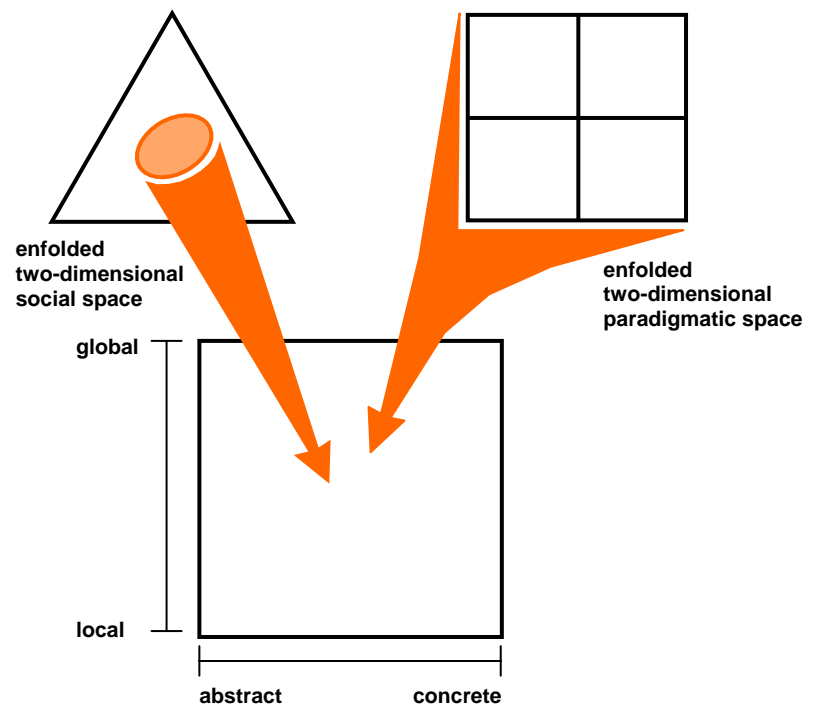


Figure 4.1.11

The 'documentary' space of the text as evidence of design ideology.

In those cases where the text in question forms part of the design programme some link may be forged by the design historian between the representation or reconstruction of design process and the interpretation of ideology. However, texts that stand in a more general relation to the output, circumstances and creative activity of the designer are, by their very nature, only open to broader socio-cultural (or socio-technical) interpretation – in this sense, they are dislocated from the active spaces of design.

### **Summary Schemata**

The spatial framework outlined above for design provides a conceptual starting point and is summarized in Figure 4.1.12. In the following section the specific intervals and movements of museum design will be used: to explore the animation of the spaces described here; to highlight where deficiencies may exist in the developing model; and to point to possible enhancements and additions that may be necessary in order to consider the broadest range of design phenomena.

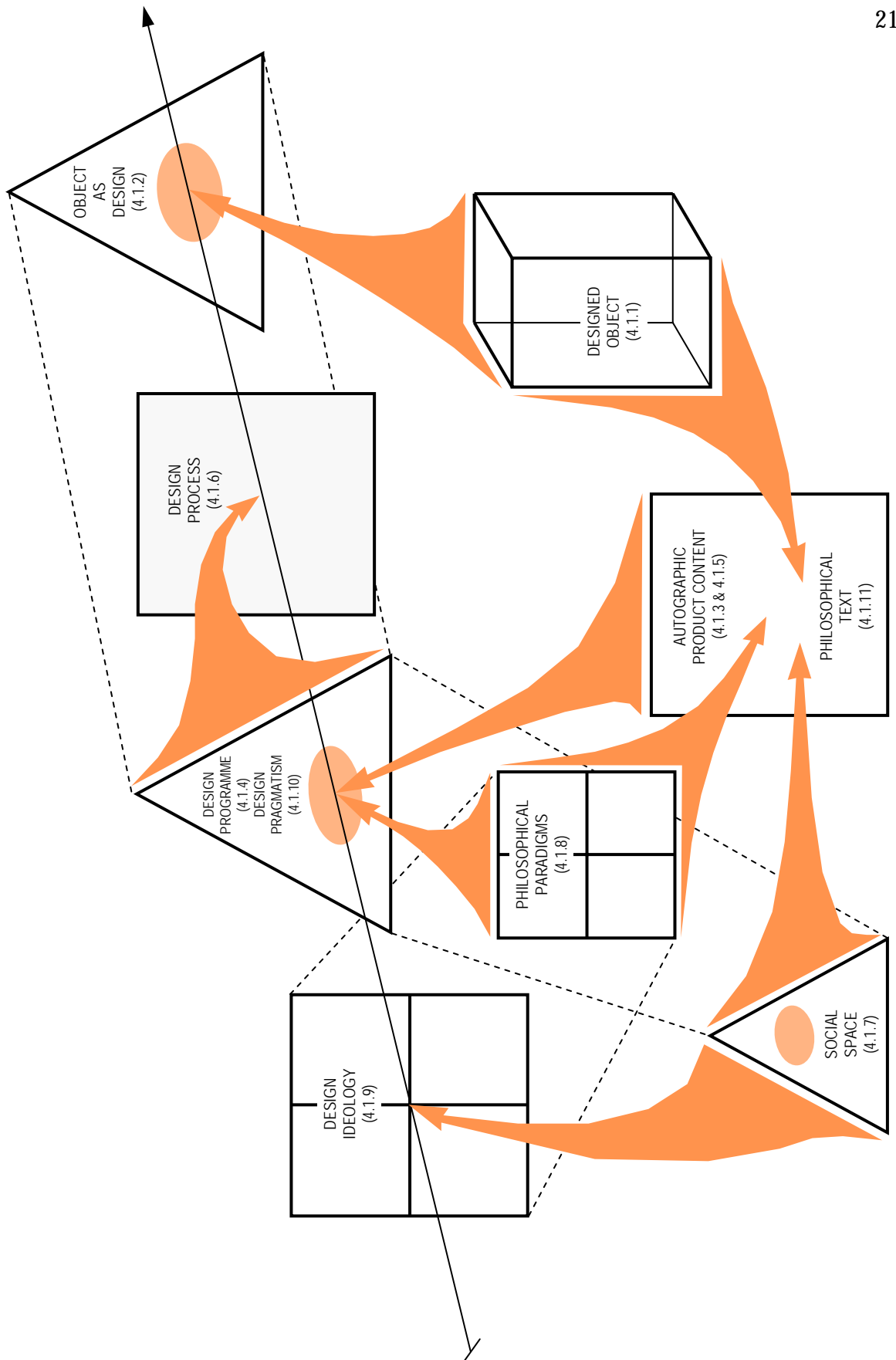


Figure 4.1.12

Spatial framework for design (Figure references in brackets)

## 4.2 The Design of Museum Design

### Contingency and Social Construction

1. The whole purpose of *Museums and Art Galleries: Design and Development Guide* [Butterworth Architecture, 1991] was:

*to provide all those involved in the initial stages of the building process - clients, users and members of the design team - with a set of tools. These tools, or resources, will help them to communicate more effectively so that they are able to work together to develop rich design programmes which will, it is hoped, culminate in the best solutions to their particular problems.* [p.1.]

The object of museum design, which broadly refers to the range of information that the design team must be competent to deal with relates to:

1. *Interpretive approach or discipline.*
2. *Size.*
3. *Content/character of collections.*
4. *Pattern of use (access and communications).*
5. *Geographical location.*
6. *Source(s) of funding.*
7. *Style of management ... (type of client organization)*

[p.4-5.]

Each of these categories itself outlines a complex of descriptive detail and practical implications, for example, pattern of use in terms of access and communications:

*attitudes to such debates as those on: heritage and commercialism; entertainment and education; and natural and artificial lighting of works of art ...become the foundation for statements of policy on research, exhibitions, education,*

Museum design is a multidisciplinary area of activity that brings together the expertise of a wide range of museum specialists. Fundamental to the professional practice of museum design is the notion that the unique context that a museum provides - through its aims and objectives, policies, collections, research and communication activities, geographical location, form of accommodation, visitor population and pattern of use - requires of the Design team a particular competence in dealing with complex project information, rigorous conservation and security requirements, and a wide range of possibilities for creative interpretation and communication.<sup>1</sup>

Anyone expecting a straightforward explanation of what design is will always be disappointed: the question easily draws us into the most heated areas of philosophical debate. To some design is the essentially technical practice of optimizing structures and the use of resources, or it is the art of creating form and meaning in things, to others it is a strategic organizational practice in developing and interpreting complex systems, or it is the fundamental human activity of bringing order into the environment.<sup>2</sup> There are many intermediate positions combining or falling between instrumental science and pragmatic art, between functionalist determinacy and humanist expectancy. However, as was noted earlier in this paper, few practising designers outside of the architectural profession have bothered themselves with these debates: why should museum designers?

One argument, which perhaps should be considered, is that, as the socio-cultural/socio-technical context in which any design appears to operate is constructed by the beliefs



*marketing, etc., and/or for a museum-wide communications strategy.* [p.5]

Michael Belcher also expends considerable effort in outlining the contextual depth relevant to museum design in *Exhibitions in Museums* (Leicester University Press, 1991.)

*This book ...is not a design grammar, nor a survey of design solutions to exhibitions. [It] attempts ...to provide an introduction to the various factors which relate to exhibitions ...which might be considered 'essential knowledge'.*

["Introduction", p.1.]

And half of the book is devoted to policy issues, organizational implications, project planning and the design brief.

2. *...a collection of attitudes, which we will call here philosophies, ...must be seen to have their effect on the design process itself. In particular the view that a designer takes of his role in society and the function and reason for his work are crucial to any real understanding of the process he employs.*

LAWSON, Bryan. *How Designers Think*. Architectural Press, 1980. g.119.

See above 2.3 Design, the discussion of *différance*, and the ontological and epistemological objects of design.

3. *...the sociocultural and political situation of a social group shapes its norms and values, which in turn influence the meaning given to an artifact.*

PINCH, Trevor & Wiebe E. BIJKER "The Social Construction of Facts and Artifacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each,

and actions of the participants, the way that we comprehend design is fundamental to the uses to which it may be put and the outcomes that we may expect it to achieve.<sup>3</sup> A functionalist approach to design will not easily serve liberatory ends and vice versa.

In the museum context we can clearly see how this proposition may be tested. If we analyse the statements that a museum makes about its identity and purpose, and the processes that it employs in pursuing its aims, we may determine in what mould it is formed. A museum that takes a mechanistic view of the structure and advance of knowledge in any particular field and concerns itself with the classification and ordering of things will not easily be served by a Design practice that develops radical interdisciplinary narrative interpretations however unambiguous and persuasive they may be. Equally, a museum that takes a more holistic view of the condition of human understanding and primarily explores the relationship between distant (in time or place) and present cultures interactively with its local community will be poorly served by a Design practice that separates and displays artefacts and facts however correct and beautiful the result may be.<sup>4</sup>

These examples exaggerate what we are more likely to find in reality, but they make a point: if one wishes to determine what to do and how to do it one needs to decide why anything should be done at all. Using such ideas as analytical tools, when we look at any museum's statements of policy we are likely to find a blend of functionalist, structuralist, liberatory and interpretive objects which together help to define the unique character of the institution, to signal its peculiar needs, and ultimately to direct the appropriate means and methods of satisfying them.<sup>5</sup>

There are different ways of understanding what museum Design is and what it is for, in addition there is

Other" pp. 17-50 in BIJKER, Weibe E., Thomas P. Hughes & Trevor Pinch. *The Social Construction of Technological Systems*. MIT Press, 1987. p.46.

4. We should consider, for example, how the British Museum will deal with the return of the ethnographic collections to the main buildings in 1997. The classical departments hold to a traditional object-centred view of the purpose of exhibition and engage a design devoted to ordered display - an ontological emphasis - which makes few concessions to an 'audience'-serving narrative construction of communications. Whereas the ethnographic department operates from an opposing position in which the exposition and celebration of cultural diversity engages a design devoted to often theatrical story telling - an epistemological emphasis. In future will ethnographic approaches be suppressed? Or will new gallery spaces, in prime locations in the restructured building, be used to establish a high-capacity core of crowd-pulling 'shows' rather like those on the ground floor of the Natural History Museum? The former approach may preserve the institution's traditional reserve but at the risk of alienating a disciplinary culture and the audience it serves. The latter course would undoubtedly radically alter the nature, identity and constituency of the institution as a whole.

5. In the past, the British Museum has managed the 'difference' primarily by institutionalizing a clear distinction between the 'permanent gallery' approach and the 'temporary,

always the question of what museum Design *ought* to be about. One cannot prescribe in general: the function of Design in any particular museum can only be determined by consideration of the local, historical, contingent context. What one can say is that historical accident and ill-considered imposition are not the processes likely to produce a Design that suits the organization's needs. If you like, museum Design must itself be designed or at very least selected according to deliberately and carefully thought through criteria.<sup>6</sup>

Although it is common to think of Design in terms of its products and its end products, as a practitioner or a member of the wider creative team, it is equally important to think of Design in terms of its processes and its philosophies. It is only through developing this understanding that we can hope to relate our activity to the practical situations in which we are expected to intervene and in the process to define problems worth solving and a comprehensive range of criteria by which solutions may be evaluated.

### **Ideology, Programme and Differance**

The dimensions peculiar to each aspect of museum designing open up the spaces of interaction, the intervals of differance.<sup>7</sup> A group of people situated with a complex of material and intellectual effects begins as a more or less open field of possibilities - an actor network capable of re-defining the identities, extents and interrelationships of its actors, and in which neither human nor non-human actors are privileged in the process.<sup>8</sup> But not all possibilities are equally probable for two key reasons. (1) A dynamic is implicit in any specific network of actors - propensities may be uncovered, a nascent force field activated. (2) Before a programme begins certain possibilities are

exhibition' approach. The former one could call an 'architectonics' of material culture and the latter a (rather conservative) 'the-matics' of material culture. The former Director, Sir David Wilson, made it very clear that he disagrees with the view that: *In a period of greater sophistication in the entertainment industry, of high investment in the arts, ...the customer must be appeased with 'exciting' and 'more relevant' museums - closer perhaps to theme parks ...*

and considers that:

*A museum is not a business nor is it primarily a pedagogical institution, nor a part of the entertainment industry ... Business ability, educational prowess and public relations experience must all be subordinated to this: ... protect[ing] the collections and present[ing] them to the public.*

WILSON, Sir David M. *The British Museum: Purpose and Politics*, Trustees of the British Museum, 1989. pp.118-9.

6. It is no accident that in their respective books Margaret Hall, Head of Design at the British Museum, promotes a normative, display grammar for museum exhibition design whilst Roger Miles *et al* at the Natural History Museum promote an educational empiricism. See: HALL, Margaret. *On Display*. Lund Humphries, 1987, and MILES, Roger S. *et al*. *The Design of Educational Exhibits*. Unwin Hyman, 1982.

7. These defining dimensions are:

1. time
2. social dynamics
3. social status
4. local-global,

proscribed and others favoured by the prejudices, pre-conceptions, diverse projects and allegiances of the human actors, and by the preconfigurations of energy and material in the non-human actors. Potentiality, therefore, is there to be negotiated, shaped, liberated. However, there is always the danger that not only may potentiality and possibility be too tightly circumscribed but that programme and process may be prescribed in such a way as to prefigure or predetermine the product. If the latter is allowed to happen, complexity is artificially diminished, the visionary and the analytical aspects of Design are dissociated, and the whole operation reduced to one of artistic indulgence and/or technical treatments. The point of design is to envision the widest field of possibilities genuinely available to the group in a specific practical situation, to open up and to empower the design process.

The actor network contains and continually redefines heterogeneous actors. Therefore, in attempting to account for the non-human, as much as for the human, aspects of dynamic activity one encounters a self-reflexive difficulty. In retrospective analysis, even if not obviously in the immediate experience of the participant, the various phenomena uncovered are potentially the outcome of two layers of social construction. The first refers to the 'real' substance of the design - philosophy, programme, process, product - to its actuality, its social and material context, and the second refers to the 'ideal' design which is presented in such evidence as reaches the analyst, in the actuality of that presentation, the social and material context of analysis. This layering blurs any distinction that one might hope to make between the social construction of a design and the social construction of its reconstruction (social reconstruction). They present their own pseudo-synchronic slices through performative social space which have the added

complexity of contrasting enfolded spaces the effects of which are difficult to separate in time (Figure 4.2.1.)

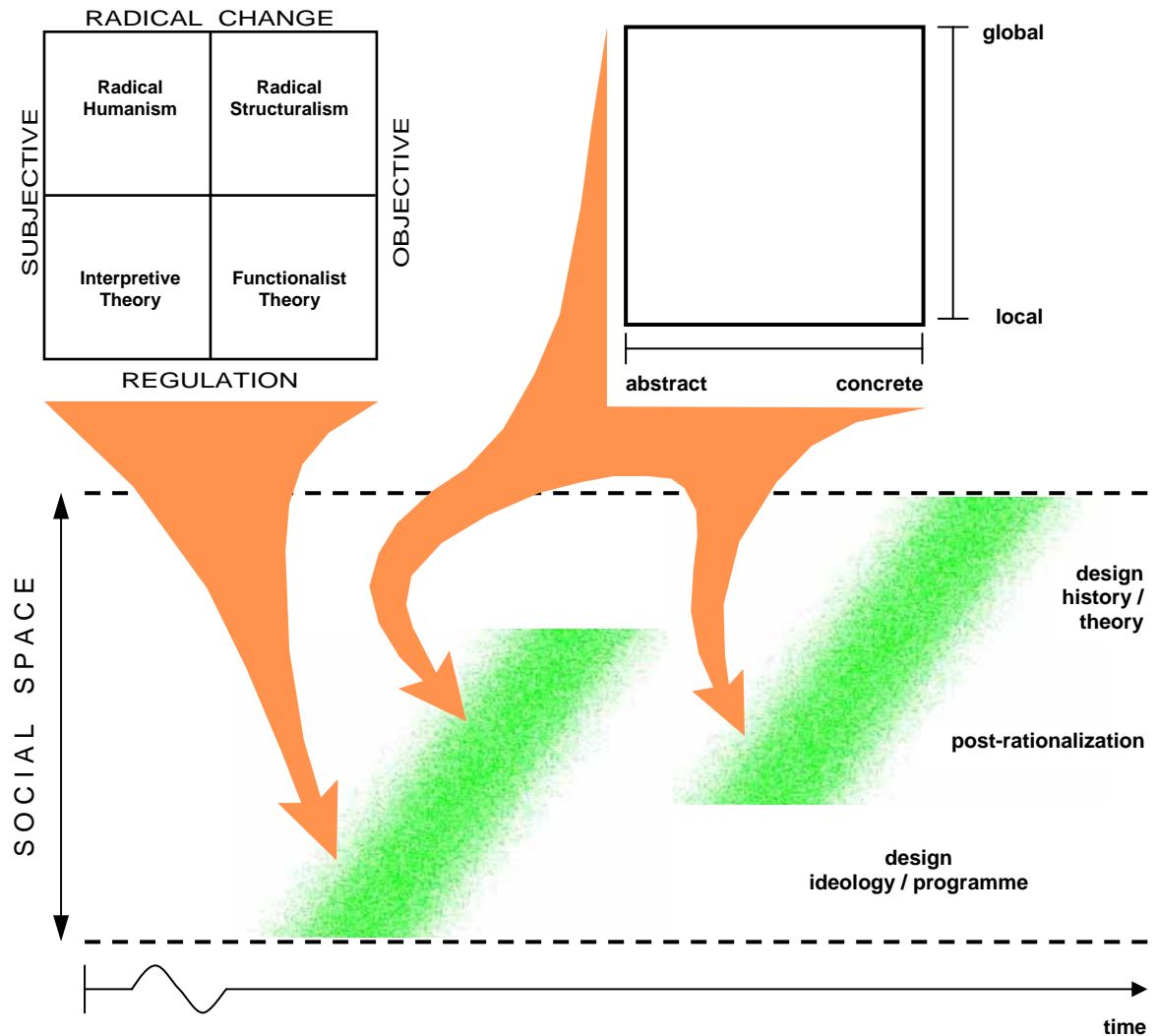


Figure 4.2.1

The layering effect of social-construction/reconstruction. The retrospective analysis of material evidence (such as project documentation) tends to blur effects such as post-rationalization between any pseudo-synchronic slice that shows a 'moment' in the social construction of a design and one that shows its social reconstruction. What links these moments is the documentary (material) evidence that reaches the analyst.

The paradoxical nature of this problem must be accepted.

At the first level, as participant in the design situation, a pragmatic approach may be adopted. The configurations of energy and material that succumb to direct manipulation may be regarded as cartesian fixities, as three-dimensional materialities present to human actors but as temporal zeros that are therefore impotent in the

5. abstract-concrete
  6. subjective-objective
  7. regulation-radical change
  8. width 'x'
  9. height 'y'
  10. depth 'z'
- In design philosophy:
- (a) dimensions 1, 6 & 7 define a

performative discursive space of ideologically committed communicative action; and

(b) dimensions 1, 2 & 3 define a performative social space of pragmatic communicative action.

In the design process:

dimensions 1, 4 & 5 define a performative documentary space of pseudo-synchronic 'moments' in design.

In the design programme:

(a) dimensions 4 & 5 define the documentary space of the autographic product; and

(b) dimensions 1, 2 & 3 define a performative social space of pragmatic communicative action identical to that in design philosophy (b above: only the contrasting enfolded spaces determine that phenomena and patterns of differentiation will appear different).

In the designed object:

(a) dimensions 8, 9 & 10 define the 'real' physical space of the material object, and

(b) dimensions 1, 2 & 3 define the 'ideal' space of the socially constructed object as design (once again this identical to the other socio-temporal spaces to be found in design philosophy (b) and in the design programme (b).)

8. ...the actor network should not ...be confused with a network linking in some predictable fashion elements that are perfectly well defined and stable ...An actor network is simultaneously an actor whose activity is net working heterogeneous elements and a network that is able to redefine and transform what it is made of.

CALLON, Michel. "Society in the Making: The Study of Technology as a Tool for

negotiation of potentiality: those that do not, as integral aspects of human actors under whose shaping power they may be subsumed.

At the second level, as dislocated observer, as analyst, critic or historian, a socio-cultural/technical approach to the reconstruction presents the broadest possibility for interpretation and reflective practice. The paradox can not be dissipated but phenomena that appear to be associated with the different levels - social construction and social reconstruction - are at least equally likely to be uncovered and therefore will constantly pose the problem of accommodation in the critical discourse.

In this way a contingent humanistic manoeuvre allows some sense to be made of the notion of 'identical' performative social spaces in different aspects of design. The key to this lies in the communicative nature of performative and productive activity in design. Communicativity depends upon the contingent production of rationale, which by definition must have a basis in ideology, in beliefs and values that are paradigmatically locatable. Discourse in general is similarly constrained: even if the incommensurable are held in tension, in post-modern fashion, the very idea of incommensurability relies upon differentiated paradigmatic space for its meaning.

*...attempts to abandon paradigm incommensurability lead, apparently inexorably, towards epistemological authoritarianism.*

*The contribution that the paradigm model made was to provide a legitimate channel of communication and development for beliefs systems which do not accord with the dominant ones.<sup>9</sup>*

Ideologies, therefore, need to be made explicit, differences located as the sites of 'conversation' and 'interaction', as interfaces, as intervals. Ideological conversation and accommodation need to be meshed into the programme,

Sociological Analysis", pp.83-103. in BIJKER et al, 1987. p.93.

9. JACKSON, N. & P. CARTER "In Defence of Paradigm Incommensurability", School of Management Working Paper HUSM/PC/2, University of Hull. pp.31 & 32.

10. RORTY, Richard. *Contingency, Irony, and Solidarity*. Cambridge University Press, 1989.

This experience is that of the 'liberal ironist' who accepts that the working out of private interests and of public obligations can not be subsumed under one final vocabulary but that they can be combined in life. Solidarity is something which must be created and expanded as an act of imagination: it is not something we will 'discover' when we understand something essentially human in us all.

11. *By the time an exhibition has been built and opened, many people have been involved...*

1 curator, 2 designer, 3 editor, 4 coordinator, 5 graphic designer, 6 lighting designer, 7 production manager, 8 joiners, 9 painters, 10 electricians, 11 security adviser, 12 warders, 13 conservator, 14 lecturer, 15 publisher, 16 photographer, 17 printers, 18 sales people, 19 'preparator'.  
HALL, 1987, pp.22-3.

12. DEAN, David. *Museum. Exhibition: Theory and Practice*. Routledge, 1994. pp.11-2.

meshed into its performative social space as an aspect of pragmatic communicative action, and into its documentary space in the form of 'rationale'. Such tensions as inevitably exist between differently committed practitioners, need to be in the open and tested again and again against the requirement for performative and productive communicative activity. In this situation, of forging a shared project, a pragmatic instinct will prevail. This is not an individualistic, self-censoring, pragmatism that suppresses commitment and breaks allegiances for the sake of progress, which conjures up an experience of dislocation and pain that the existentialists were all too conscious could characterize the condition of modernity. It is a new kind of pragmatism that engages the certainty of identity and knowledge only in moments that require individual expertise and defers to the opportunities in explored difference, engages in a play of difference, in moments that require solidarity. This invokes the contingency and irony that Rorty proposes can characterize a positive experience of the postmodern condition.<sup>10</sup>

### Actor Network Construction of Museum Design Ideology

If one takes a familiar network of actors in museum design, such as that described by Hall (1987),<sup>11</sup> a number of observations can be made:

(1) The 'idea' for an exhibition may come from any of a wide range of sources:

*audience suggestions, board members or trustees, collections management personnel, community leaders, curators, current events, director, educators, staff and volunteers.*<sup>12</sup>

*Often the museum director or the head of department will have recognised a need or discerned the merits of an idea, or Government departments prompted perhaps by subject experts*

*or potential sponsors, or entrepreneurs will have fed in the idea from outside.*<sup>13</sup>

(2) The initial team involved at the inception of a project will be small perhaps only two people, rarely more than a handful. This is the team that shapes an idea and begins to make explicit a project programme. At the outset Hall includes the following roles: curator, editor, designer, and coordinator,<sup>14</sup> Belcher: director (to initiate project), curator, designer, conservator, educator/editor, and organizer/manager,<sup>15</sup> and Dean: director (to set up planning team), curator, educator, designer, and project manager.<sup>16</sup>

(3) Even at the beginning of a project, there are both management-oriented and product-oriented issues to be addressed.<sup>17</sup> The issue of who is 'client' and who is 'designer' may appear to be contingent upon the programme and the scale of the project. But in fact this is a non-issue, the result of misappropriating terms devised for legal clarity in commercial contexts: if the designer has to form a special contract in order to engage in the project then normally it is the museum authority that is the client and the designer the provider of contracted services. In a general 'performative' sense this legal contingency is, if not irrelevant, then of secondary importance: in any specific project it may affect the hierarchical positioning of the designer, but the dynamic nature of the roles and relationships mean that the character of various interfaces is of primary importance. Dean's terminology is better at capturing the relationship between various actors in that it identifies roles which are different in type - a cluster of productive roles and a separate co-ordinating role - and it holds true whether the design, or any other role, is fulfilled by specially contracted or by traditionally employed staff. However, there are other ways of categorizing roles that set up different structural expectations of the team. For

13. HALL, 1987, p.21.

14. *ibid.* p.22.

15. BELCHER, Michael. "Communicating through museum exhibitions" pp.649-59. in THOMPSON, John. M. A. (ed.) *Manual of Curatorship*. Butterworth / Museums Association, 2nd edition 1992. p.655.

16. DEAN, 1994, p.14.

17. *ibid.* p.13.

example, one might suggest that the appropriate role-types: are strategist, advocate, facilitator, and maker. In such a scheme which hat a particular individual wears will tend to change depending upon the nature of the task in hand, and the problem of dynamics comes down to maximizing the variety and minimizing the number of hats in use.

(4) As a developing project reaches the point where significant resources must be committed, the team gets bigger, a wide range of specialists get involved, communications become intensive and detailed, the opportunities for things to go wrong multiply, and design project management becomes the centre to which all other activities relate.<sup>18</sup>

(5) The designer, in wrestling with the many conflicting requirements of the programme, acts as a kind of “broker between the other interests behind the project”.<sup>19</sup> In this general sense, every designer plays an ‘interpretive’ role. What is sometimes simplistically referred to as ‘responding to the brief’, is often, even if not always consciously, a context-shaping activity, in the socio-technical sense, as well as a product-shaping activity. A constellation of others’ interests is represented or reconstructed, and repeatedly reconstrued through the design process and recorded in the programme documentation. An embedded, progressively distorted, ‘message’ emerges, first in the autographic product and ultimately, after the opportunities for anamorphosis that realization, production and customization represent, in the designed object. Thus however imperfectly:

18. *Others may join the team for a large project; experts on conservation, security, education, evaluation, publicity, and technical advisers on the more specialised aspects of the lighting, use of computers and audio-visual presentation.*

Hall, 1987, p.23.

19. *ibid.* p.22.

20. HUGHES, Thomas P. "The Evolution of Large Technological Systems" pp.51-82. in BIJKER et al, 1987. p.77.

*Durable physical artifacts project into the future the socially constructed characteristics acquired in the past when they were designed.*<sup>20</sup>

This is an interpretive role which addresses the semiotics of social and cultural values. It should not be confused with that intentional notion of purposefully communicating an



explicit information content, which defines the more obvious interpretive role that is expected of the exhibition designer, of all communication designers.

These observations point to an initial picture of how the ideological may be accommodated in museum design activity. In Figure 4.2.2 the social space of pragmatic communicative action allows that the roles defined in the initial development team form a differentiated zone - an actor network - in the midst of the wider social context. In

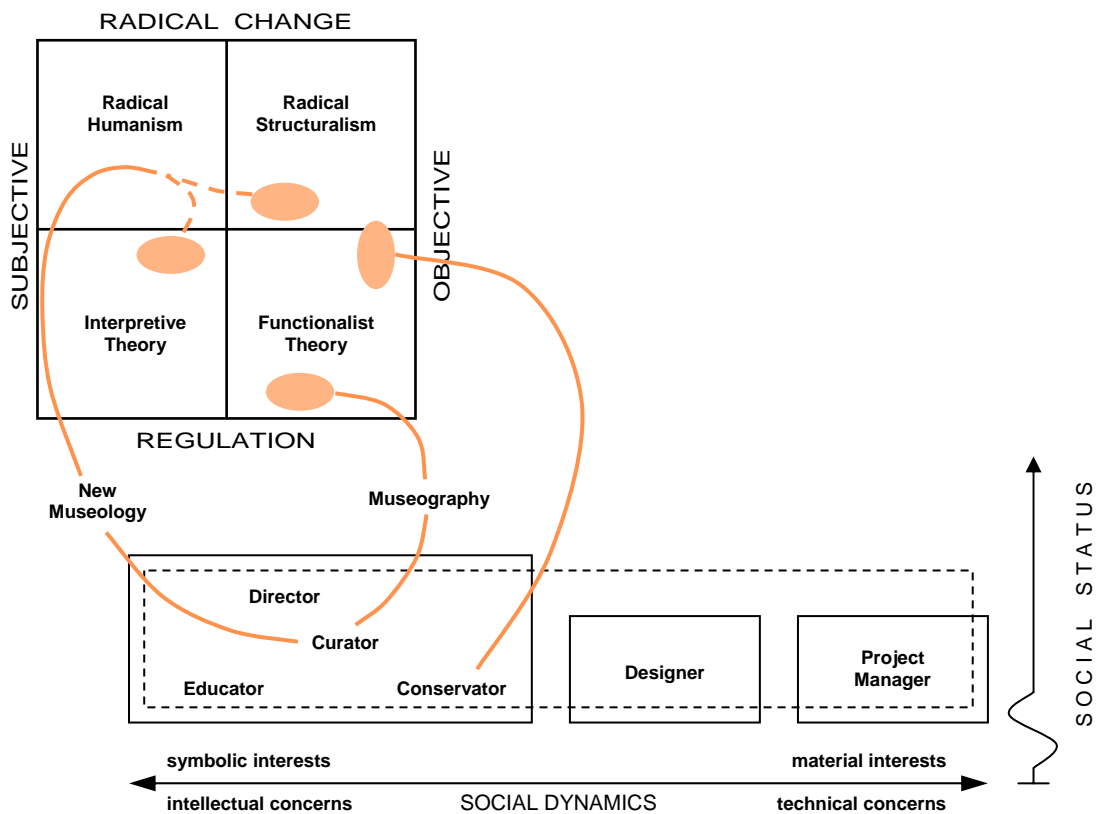


Figure 4.2.2

The pseudo-synchronic moment of museum design project inception. The enfolded paradigmatic space allows ideological tensions to be pictured in the performative social space.

any pseudo-synchronic state of the actor network's transformations, each role assumes a particular position in the paradigmatic space of design ideology. However, if roles are defined one way these ideological positions may appear relatively stable, if another to be quite volatile.

For example, if roles are defined according to a system of institutionally defined jobs - curator, designer, conservator, educator, project manager - then we must accept that, although the conservator's ideological position may be a fairly stable functionalist one, perhaps with leanings towards radical structuralist interpretations of meaning wherever historical or contextual knowledge impinges directly upon the empirical knowledge of the conservatorial object, the curator's ideological position may be far more difficult to pin down. On the one hand, the traditional curator, a believer in museographical norms enshrined in professional codes, may be firmly associated with functionalist notions and concerns - objective knowledge, order and control of social and material conditions, established protocol. On the other hand, the 'modern' curator, one familiar with the new museology, may be loosely associated with both radical structuralist and interpretive concerns. He or she may believe that the shaping and directing of museum aims and practice to worthwhile social purposes, as determined by an objective critical analysis of current conditions, ought to be attempted even though the interpretation of current conditions is ultimately a question of individual experience and is itself a culturally and socially conditioned activity. Such tensions highlight the unresolvability of museological concerns, and the resulting lack of traditional normativity presents the curator with a daily experience of the post-modern condition.<sup>21</sup>

21. *I define postmodern as incredulity toward metanarratives. ... our incredulity is now such that we no longer expect salvation to rise from these inconsistencies ...*

LYOTARD, Jean-Francois.  
[1979] *The Postmodern Condition: A Report on Knowledge.* Trans. Geoff Bennington and Brian Massumi. Manchester University Press, 1984. p.xxiv.

### **Generic Roles and Ideological Stability**

If roles are defined generically, via group dynamics for example, a different set of ideological associations will emerge in any pseudo-synchronic state of the actor network (Figure 4.2.3.)

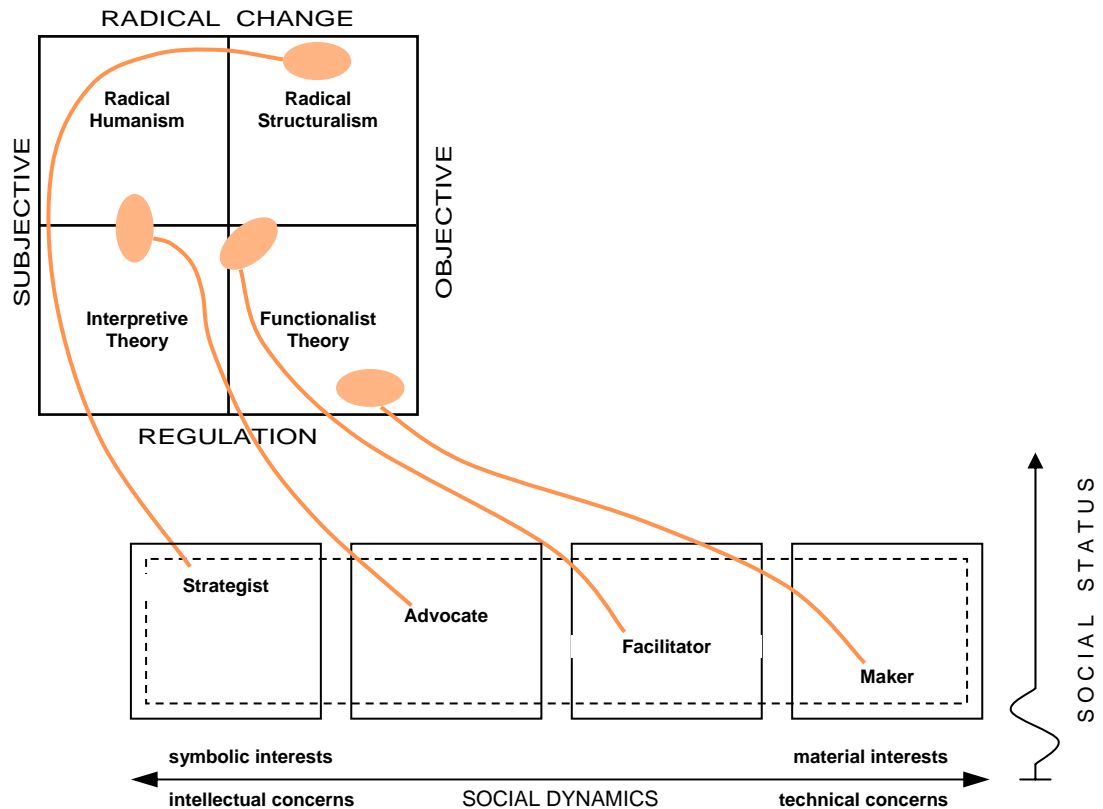


Figure 4.2.3

The pseudo-synchronic moment of museum design project inception. The enfolded paradigmatic space allows ideological tensions to be pictured in the performative social space.

Brunelli has suggested that the designer may adopt any of four quite distinctive roles in the context of museum development:

1. *The Exhibitions Officer - the provider of cases, stands, etc. to specific dimensions; the producer of labels, leaflets, catalogues, etc. using text provided by others; and the provider of illustrations, photographs, models, computer technology, lighting and other specific expertise, who goes beyond performance specification. ...*
2. *The Planner Innovator - a designer involved at the planning stage either a) before a brief exists to offer alternative schemes to fit an established strategy or b) to discuss a brief in such a way as to cause a change in what was required.*
3. *The Manager - a designer responsible for delegating work and overseeing the implementation of a project within its conceptual framework, budget and progress from its early stages up to completion.*
4. *The Strategist - a designer engaged in the formulation of new strategy or changes in existing strategy.*<sup>22</sup>

22. BRUNELLI, Maria. *The Role of Designers in the Management of Museums*. Ph.D. Thesis. Institute of Advanced Studies, Manchester Metropolitan University, 1993. pp.255-6.

23. *Theorists located within this paradigm advocate a sociology of radical change from an objectivist standpoint. ...Radical structuralism is committed to radical change, emancipation, and potentiality, in an analysis which emphasises structural conflict, modes of domination, contradiction and deprivation. It approaches these general concerns from a standpoint which tends to be realist, positivist, determinist and nomothetic.*

BURRELL, G. & G MORGAN. *Sociological Paradigms and Organisational Analysis*. Heinemann Educational Books, 1979. p.33-4.

24. HILKE, D D. "What is an audience advocate? A Position Paper", unpublished, undated. Also quoted in HOOPER-GREENHILL, Eilean. *Museums and their Visitors*. Routledge, 1994. On Hilke's consideration of the audience advocate:

*...the staff member responsible for promoting the needs of visitors, in developing, reviewing and revising exhibitions*

she says of her conclusions: *these are excellent guidelines* [pp.178-9.]

25. *The radical humanist paradigm is defined by its concern to develop a sociology of radical change from a subjectivist standpoint. Its approach to social science has much in common with that of the interpretive paradigm, in that it views the social world from a perspective which tends to*

These roles may be compared with the role-types suggested earlier (observation 3) strategist, advocate, facilitator, and maker. In reverse order: the designer as strategist is almost self-explanatory, what is implied in the generic term 'strategist' is that overall direction is determined and contradictions arising out of implementation are resolved by the strategist. The strategist's role is concerned with shaping the conditions for change and in this sense the strategist is a natural radical structuralist.<sup>23</sup>

The designer as planner-innovator is, amongst other things perhaps, an 'advocate'. The advocate presents particular ideas and represents particular interests, that are not necessarily his or her own, that are relevant to the situation, and that may not otherwise get a fair hearing. Advocacy may be necessary either because the ideas and interests come from outside the immediate environment or because the party they concern is not present or competent to make its own case.<sup>24</sup> There is an aspect of design advocacy, therefore, which is visionary and concerns radical change, and in this sense the advocate is a natural radical humanist.<sup>25</sup> But there is also an aspect which is about accounting for the richness and variety of human experience - what is 'other' than ourselves - and in this sense, the paradigmatic sense, the advocate is a natural interpreter.<sup>26</sup>

The designer as manager is a 'facilitator' in the sense that the smooth progress of implementation is the central concern and the organization and monitoring of resources and processes to achieve some predetermined overall goal are the main activities. The facilitator's role is concerned with cause and effect - causing, by means that are relatively reliable, effects that are relatively certain - though with some of that concern to be sensitive to and responsive to social conditions that characterizes the strategist's shaping role and the advocate's interpretive role. The facilitator,

*be nominalist, antipositivist, voluntarist and ideographic. However, its frame of reference is committed to a view of society which emphasises the importance of overthrowing or transcending the limitations of existing social arrangements.*

BURRELL & MORGAN, 1979. g.32.

26. *The interpretive paradigm is informed by a concern to understand... the fundamental nature of the social world at the level of subjective experience ...within the frame of reference of the participant as opposed to the observer of action. ...it is underwritten by an involvement with issues relating to the nature of the status quo, social order, consensus, social integration and cohesion and actuality.* ibid. p.28 & 31.

27. *The functionalist paradigm ... is a perspective which is highly pragmatic in orientation, concerned to understand society in a way which generates knowledge which can be put to use. It is often problem-oriented in approach, concerned to find practical solutions to practical problems. It is concerned with the effective 'regulation' and control of social affairs.* ibid. p.26.

28. Topalian describes a 'fully-fledged design project' as involving: conceptualization, interpretation, formulation, and implementation. In a 'pair-of-hands' assignment the designer's involvement is focussed on the 'formulation':  
*of a solution to a tightly defined problem and solution concept; the client may actually dictate the form of solution, in which case the designer's involvement relates to the translation of the solution in*

one could say, is a natural functionalist but a rather soft one who has leanings towards both radical structuralist and interpretive positions.<sup>27</sup>

The designer as Exhibitions Officer is a 'maker' in the sense that the business of producing the exhibition is dependent upon the maker getting practical things done. This does not always mean that the designer as maker actually handles construction materials, operates the workshop machinery and fixes things together on site (although at crucial moments it can) but it does mean that production documents: working drawings, artwork, specifications, etc., quality control, and finishing processes are all the designer's direct responsibility. The maker's role is concerned with causes and effects that are more reliable and more certain than those generally encountered in the facilitator's organizing and monitoring role, and therefore the maker is more clearly a natural functionalist.

In overall project terms the designer's role may change little. What Topalian calls a 'pair-of-hands' project involves the designer as 'maker' from the moment he or she is engaged.<sup>28</sup> Equally, the consultant designer, especially on a larger project of this type, is likely to be cast in the role of facilitator and be primarily concerned with client liaison and with delegating, co-ordinating and chasing design and production work. In either of these cases room for ideological posturing is severely limited, in the maker's case primarily by the consuming involvement of the design process, and in the facilitator's case by the almost irresistible demand for pragmatism that is the normal result of occupying a nodal position constructed by the actor network. However, in the case of the planner-innovator, who is a design advocate and probably also an advocate for one or more other interests such as audience, sponsor or technology, and the strategist, who is in effect associated

*the clients mind into physical reality - no more, no less.*

TOPALIAN, Alan. *The Management of Design Projects*. Associated Business Press, 1980. p.8.

directly with the client's interests, the role is likely to be short-lived and to be transformed by the actor network rather rapidly into either that of facilitator or of maker. Whilst the role of strategist lasts, for instance during the inception of a new project, the scope, indeed the necessity, for an ideological position is clear: in order to establish an identity and a profile, gain political and institutional endorsements, and public and financial support, a clear and consistent presentation of principles, purposes and goals needs to be made with great conviction to a variety of audiences.<sup>29</sup> Equally, during the relatively short duration of the type of advocacy role the designer as planner-innovator represents, an ideological position emerges out of the presentation of a scheme or the revision of a programme that clearly has the aim of influencing subsequent strategy. The designer must make this ideological position explicit simply to convince the client, or the strategist of the moment, that the proposal is being made with some appreciation of its wider social, cultural and possibly technical implications.

29. op. cit., Topalian points out that:

*... on some occasions, clients will value the fresh viewpoint designers can adopt when they are allowed to seek out problems, and designers may be involved almost single-handed in the definition of problems right through to the formulation of solutions.*

Clearly the 'ideation' involved in the interpretation of a practical situation and the social-cultural/technical context, and the conceptualization of problem-solution definitions only succeeds if articulated in terms of persuasive and unambiguous rationale. Therefore, project inception is unavoidably ideological - a function of competing discourses, of language games, of politicized rhetorics.

### **Ideological Constellation and Generic Role Drift**

The ideological associations of the designer form a constellation in themselves. In Figure 4.2.4 three possible pseudo-synchronic slices across the performative social space of the design programme are layered onto each other: in effect the dimension of time has been collapsed to produce a simplified view in which each actor appears frozen to a point. The first slice shows the project inception. A designer recruited very early on may be involved in shaping the original idea and in formulating strategy, a role clearly associated with the radical structuralist paradigm in design ideology. In the second slice such a designer would be concerned initially

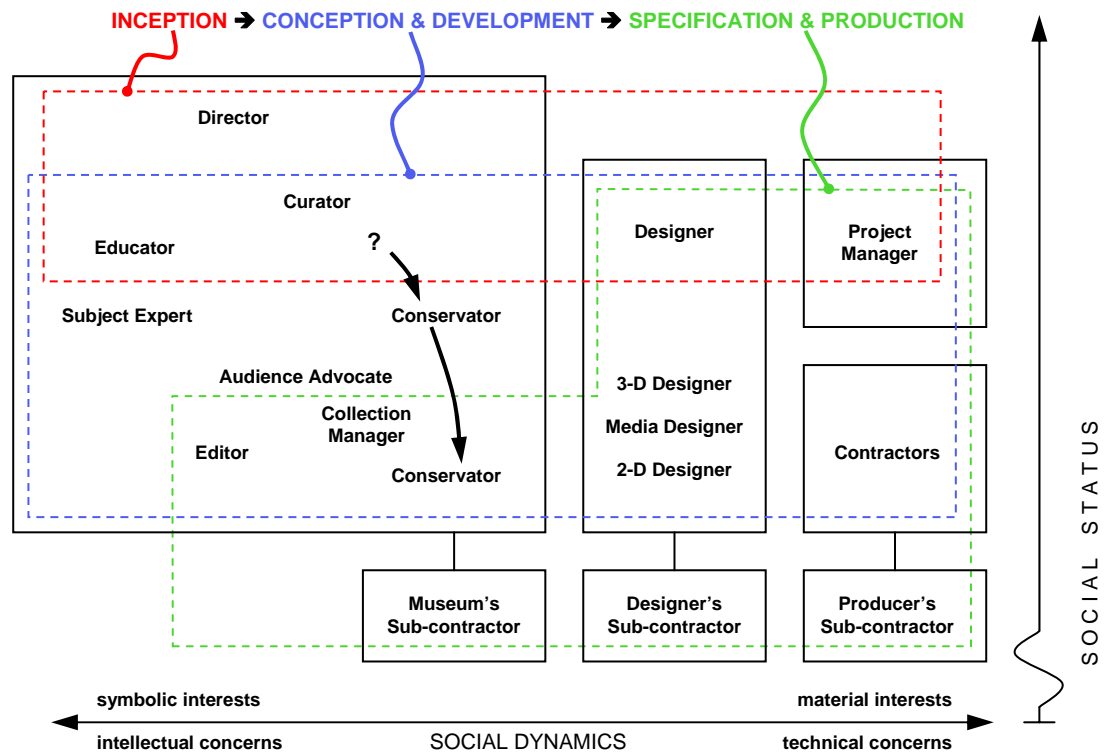


Figure 4.2.4

The performative social space of the museum design programme. The areas labelled 'inception', 'conception & development', and 'specification & production' represent three possible pseudo-synchronic slices through the space.

with the development and presentation of “alternative schemes to fit an established strategy” and thus to act as a design advocate, a role clearly associated with the radical humanist and interpretive paradigms in design ideology. On a larger project this designer would subsequently be concerned to control the process of developing the ‘concept scheme’ into a realizable design. This constitutes the facilitator role which is clearly associated with a ‘soft’ functionalist position near the centre of the paradigmatic space of design ideology. On a smaller project, as the only designer on the team, this designer may be involved in continued advocacy drifting further and further towards the hard functionalism of the maker’s ideology as the design becomes more and more clearly realizable. Finally, in the third slice the designer becomes wholly concerned with the practicali-

ties of specification and production on a larger project partly as facilitator, managing the makers, and partly (or on a smaller project, wholly) as the principal maker.

From this pattern one can see that, as a project progresses, there tends to be a 'drift' across the roles from strategist to advocate to facilitator to maker (Figure 4.2.5.)

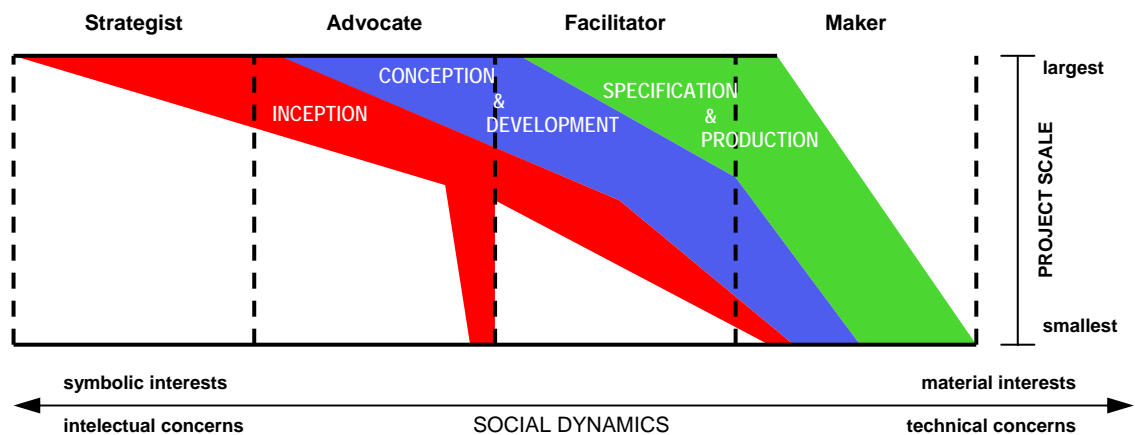


Figure 4.2.5

The drift of generic roles adopted by the designer as a function of project scale

The larger and more prestigious the project the more likely the designer is to start at the strategist end of the scale and the smaller and more low key the project the greater the proportion of his/her time is taken up in the role of maker.

### Programme Dynamics and Status Ambiguity

Successive slices through the performative space of the design programme it seems may be related to a drift in the designer's generic role. This drift presents a two-dimensional movement in the designer's position in social space. Not only do the social dynamics gradually become less focussed on symbolic interests and intellectual concerns and increasingly dominated by material interests and practical or technical concerns, social status is also affected. For contingent and historical reasons society values those who are able to apply intellectual abilities, literacy and



articulacy to social purposes more highly than those who apply practical abilities, visual literacy and skilfulness.<sup>30</sup> There is a tendency, therefore, for the designer's and others' relative status to be higher during moments when the role of strategist is adopted and to be progressively lower as the roles of advocate, facilitator and maker are adopted.

In some practical situations this can lead to a great deal of confusion about the 'true' status of an individual. One should remember that 'inception', 'conception & development', and 'specification & production' are conventional but arbitrary pseudo-synchronic slices through a performative social space. Aspects of project inception may happen concurrently with, and some later than, aspects of project conception and development. The 'blur' in any project, that opens up the design process significantly, will take up a very significant proportion of the 'performance' time, the duration of the project (Figure 4.2.6.) The hierarchical status of an individual, therefore, may change dynamically in the course of a project and only give the appearance of smooth transformation in retrospect, in the reconstruction of pseudo-synchronic states. Looking again at Figure 4.2.4 one can see that, for example, the conservator may have an important advocacy role during project inception advising on the availability and suitability of collection items, technical resources and physical space. This would constitute a social status comparable with those of the designer, the educator, and the project manager in the executive project team. During conception and development the conservator may continue an advocacy role directed towards the development of the design, but now alongside subject expert, audience advocate, and contractor. And, in the same figure, during specification and production of a smaller project the conservator may have a highly skilled productive role as a maker concerned with stabilizing

30. ...*"linguistic chauvinism"...* can very easily incline us to suppose that the best talkers, most cogent language users among us, are at the same time those who most admirably show that central human trait of rationality - are in effect the best people. HARRISON, Andrew. *Making & Thinking: A Study of Intelligent Activities*. Harvester Press, 1978. p.2.

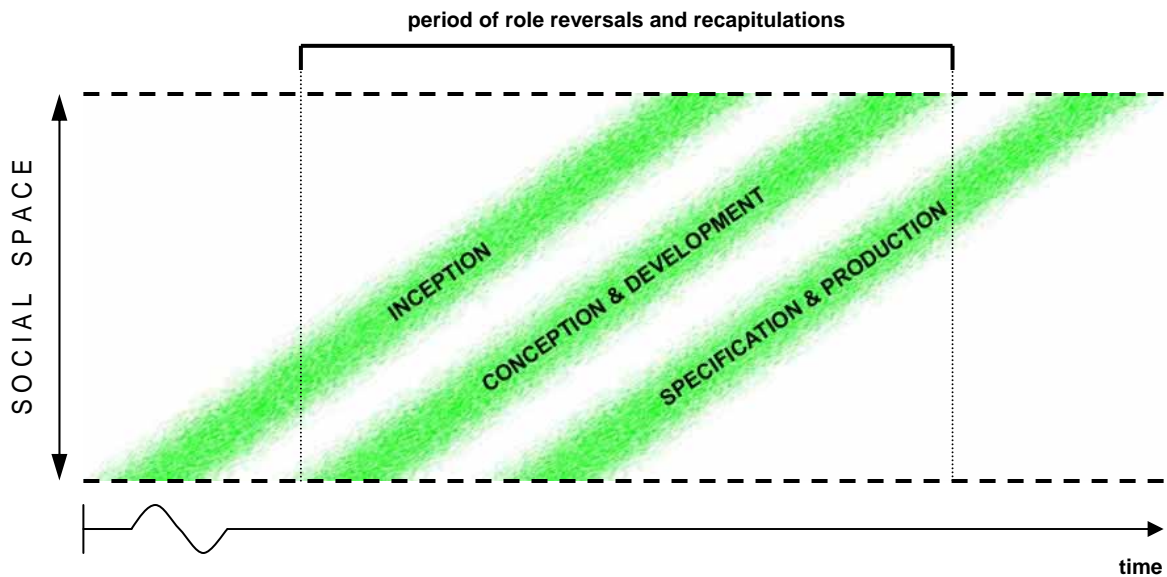


Figure 4.2.6

A sequence of pseudo-synchronic slices through the performance time of a design programme showing the potentially substantial period during which activities across conventionally defined project 'stages' may be happening concurrently. Aspects of what are thought of, in conventional linear terms, as 'later' stages may in fact precede aspects of 'earlier' stages.. Such contingent messiness requires of the designer the ability to cope with frequent role reversals and recapitulations. (Compare with figures 4.2.4 and 4.2.5.)

collection materials and preparing mounts and supports to the 3-dimensional designer's specifications. On a larger project this may be primarily a facilitator's role in respect of the work of a conservation team perhaps including museum sub-contractors. In either case the conservator is assigned or expresses a status comparable with that of the editor, the contractor, and the graphic and media designers who at this stage are also involved in highly skilled production work – illustration, artwork production and the supervision of designer's sub-contractors such as photographers and typographers.

An aspect of any actor's existential angst therefore can be knowing just where he or she stands in the contingent hierarchy constructed by the actor network. And the greater the range of generic roles undertaken by the actor, and the more dynamic the actor network's transformations, the greater the potential for angst becomes. In

these terms the designer, one can appreciate, is a rather vulnerable individual and the first section of the next chapter (5.1) will attempt to focus on and situate the individual particularly in relation to the space of the design process and to the nature of the complexity with which this engages. But, before that the last pairing of discursive locations opens up another interval by exploring the organizational quality of the museum in reflexive mode.

### 4.3 Museality of Organizations

#### When is a museum not a museum?

‘Museums collect, document, preserve, research, exhibit and interpret material evidence and associated information for the public benefit’.<sup>1</sup> This definition may be read as inscribing the definitive operations of a museum in a code. Adherence to the code therefore legitimizes the museum in the social and political context. The code is the museum’s qualification: adherence to it the expression of a competence.<sup>2</sup> Were we to find this same expression of competence elsewhere - in some organization other than what we think of as a museum - we would be presented with a dilemma. Either an organization we thought was not a museum is in fact a museum, even if of a new sort, or, a code we thought defined and legitimated only museums in fact has a broader application and expresses a competence found not only in museums as such but also in other organizations.<sup>3</sup> We might conclude that some organizations have museum-like qualities, a museal focus.

1. Museums Association, 1984.

2. The Museum Registration Scheme operated by the area museum councils on behalf of the Museums and Galleries Commission sets out a wide range of criteria which take their logic from the definition of a museum.

3. The Jorvik Viking Centre in York, which does not meet all of the expected criteria in the Museum Registration Scheme, has nevertheless made a successful application for registration.

4. The words ‘museal’ and ‘museality’ do not appear in the Oxford English Dictionary.

5. KAVANAGH, Gaynor. “Museums in Partnership” [pp. 127-8] in HOOPER-GREENHILL, Eilean. (ed.) *Museum Media Message*, Routledge, 1995. pp. 124-34.

#### Defining the Museal

The term ‘museality’ has found little favour in the UK<sup>4</sup> where it can be taken to imply a discredited belief in the certainties of traditional museographic practices.

*The deadening hand of the concept of ‘museum worthiness’ (or is the ghastly word ‘museality’ to be used here?) has got a fair amount to answer for, including: partial and often tediously repetitive collections, the omission of those objects - and therefore histories - that fail to conform and the perpetuation of damaging stereotypes.*<sup>5</sup>

Museum worthiness however is not the key question. As

Maroević has shown in a structural-functional analysis of museum communication based on Tudman, museality, as the socially constructed quality that allows a museum object to function, is easily implicated in a multidimensional field of information, meaning, difference.<sup>6</sup> Further than this, once the object as document has been so implicated it can be shown that any notion of finality in the process of communication must be abandoned, that the presence of the document must be continually deferred, distorted, distanced.

The visibility of this play of *différance* is somewhat masked by the style of notation adopted by Maroević. Using this, radically different spatialities - the physical, the social and the documentary - are each collapsed into a single dimension and sheared in order to produce a rather exotic virtual space of bridges between contributing elements. In this way the 'semiotic' (Figure 4.3.1.) is played off against the 'materialist' (Figure 4.3.2.) in a hybrid structural - functional schema (Figure 4.3.3.)

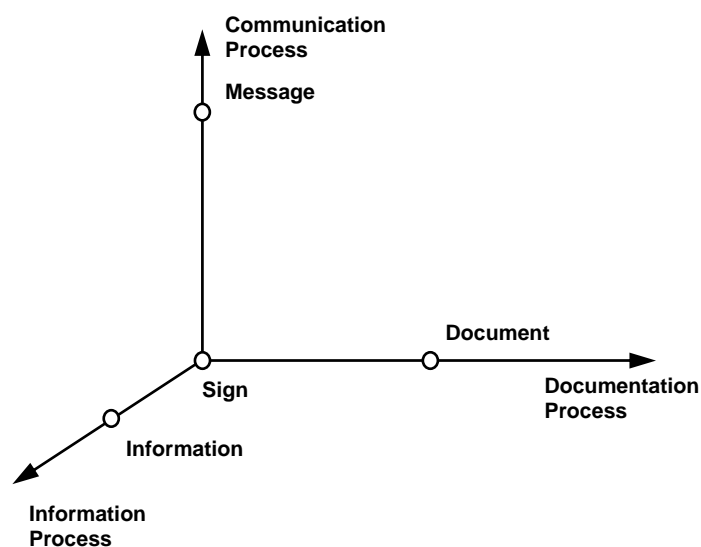


Figure 4.3.1

6. MAROEVIĆ, Ivo. "The Museum Message: Between the Document and Information", in HOOPER-GREENHILL, 1995. pp.24-36.

The semiotic or structural sub-schema implicated in the Tudman analysis of the museum object as used by Maroević.

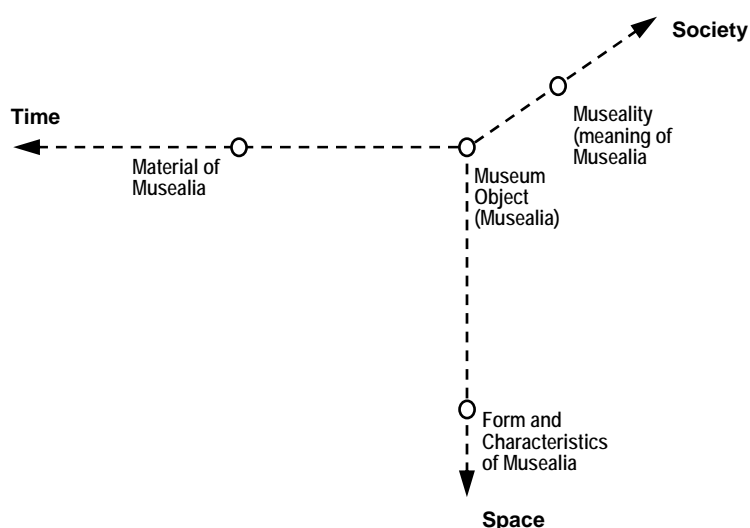


Figure 4.3.2

The materialist or functional sub-schema implicated in the Tudman analysis of the museum object as used by Maroević.

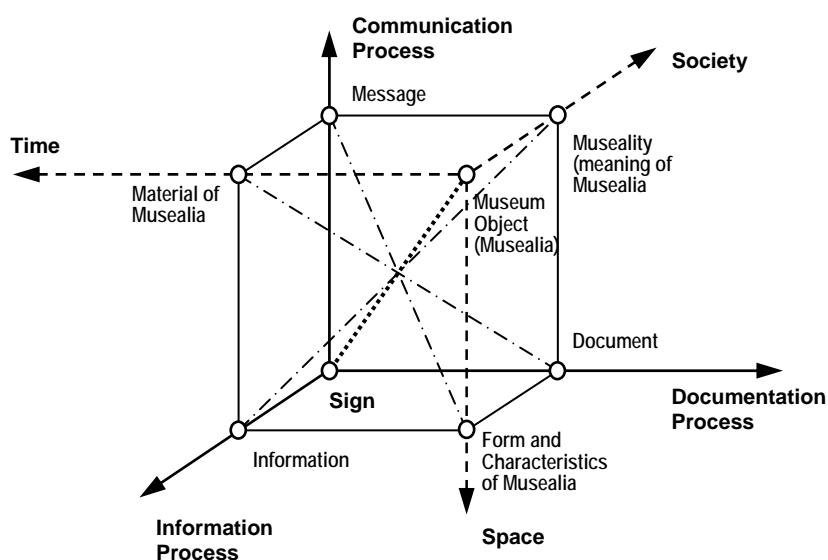


Figure 4.3.3

The Tudman structural-functional analysis of the museum object as used by Maroević in which semiotic and materialist sub-schemata are set off against each other. Parallel axes are in effect sheared as indicated by the connecting dot-dash lines. The Sign-Museum Object relation is indicated by the dotted line.

7. See above 2.0 Space and Theory: Spatial Models. Ref: LEFEBVRE, Henri. [1974] *The Production of Space*. Trans. Donald Nicholson-Smith. Basil Blackwell, 1991. p.5.

I find this unhelpful and also in breach of Lefebvre's rule regarding the need to account for any move from one spatiality to another.<sup>7</sup> In place of the conflated structural-functional analysis adopted by Maroević I propose a multi-dimensional analysis in which the contributing physical,

social and documentary spatialities remain distinct. This requires a symmetrical construction of schemata in which the moves between one spatiality and another are accounted for in the clear activation of each space in turn by projection along a linear dimension of time.

In the first construction the museum object, as part of a 'moveable cultural heritage', is construed as a document of the physical/social 'reality' from which it is taken by the museum. In materialist terms, as a document it has an accumulated information content which may be 'read', translated, reinscribed, etc. as a documentation process. The focus on documentation constructs a pattern of uncovered, masked and recovered information which changes over time - this is the documentation process. Invisible to this but contributing its specific form and context are (1) a material physical object which is embedded in the process as the sign and (2) the social reality of the object which is embedded in the process as its margin of uncertainty, its linguistic (in the broadest sense) negotiation, its meaningfulness. Being operated on only as a sign, the presence of the physical object is distanced and distorted. Indeed, it will be repeatedly substituted for and simulated in the reading-translating-reinscribing process. And, as a contested object always involved in a movement from one meaning context to another - a participation in narratives that construct identity, social 'place' - its social presence is similarly always deferred, distorted and distanced from the documentary space (Figure 4.3.4.)

In the second construction the museum object, as part of a socially contested arena of meaning, is construed as the 'museal' object - an object which invokes the quality of museality. Museality is a particular form of socially constructed meaning that processes indefinitely through the language games, power plays, and shaping activities of

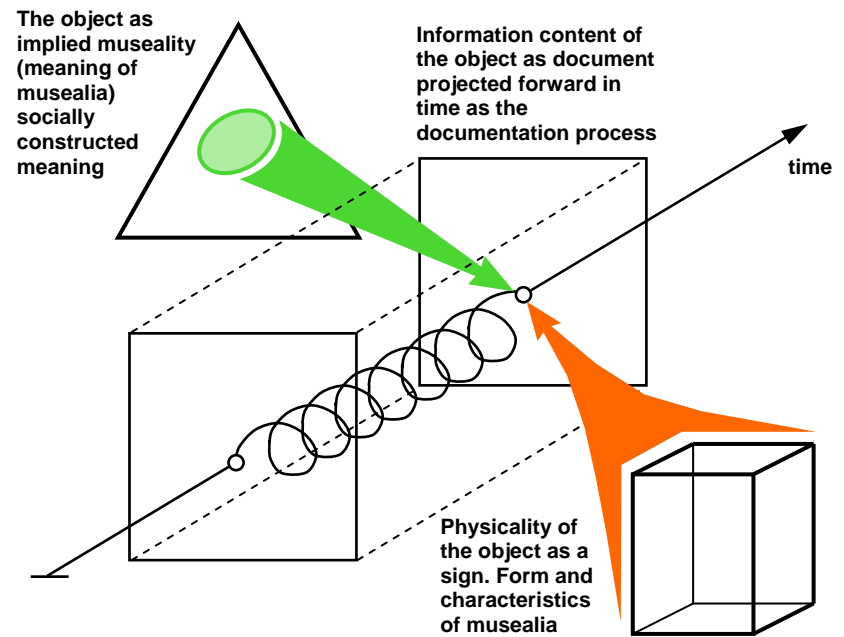


Figure 4.3.4

---

The object as 'document'.

---

the various individuals and groups in the museum environment. By focussing on 'museality' a specific idea of socially constructed meaning is being referred to, one which: (1) is irredeemably bound up with the material culture; (2) is dependent upon the removal (actual or symbolic) of the material object from the 'real' world context in which it was created and used, and; (3) is selective, reflexive and radically conservative in its attitude towards the identity of the object. In the social contest over meaning the physicality and the information content of the object remain invisible contributors, enfolded in the social space but continually distorted, distanced and deferred in a play of *différance* (Figure 4.3.5.)

The third schema constructs the ontic track of the museum object as a physical material entity. This antic track is primarily characterized by a moment of radical transition - that turning point at which the social context of constructed meaning changes from one related to the object's conception, creation, distribution, use and disposal



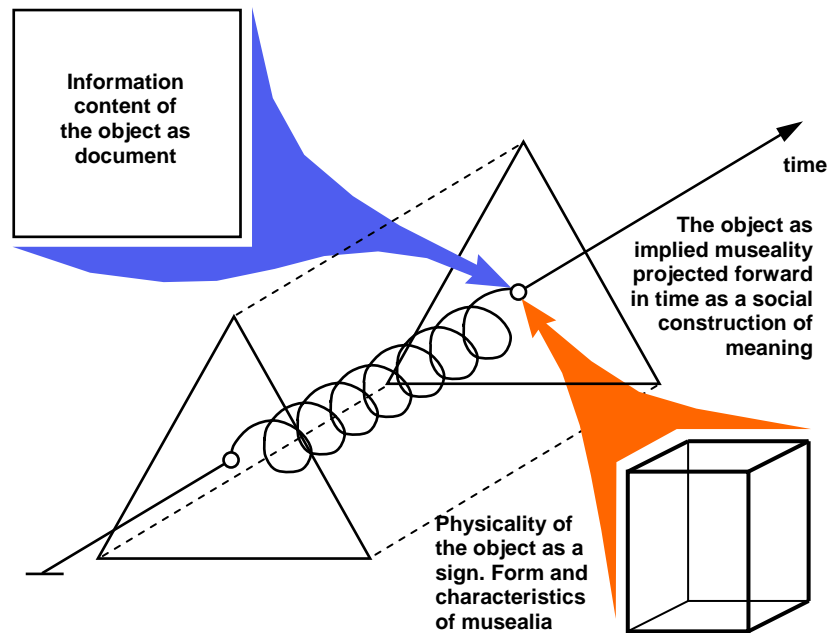


Figure 4.3.5

The object as 'implied museality'.

to one related to implied museality.<sup>8</sup> At this moment the process of accumulating information in the object is qualitatively altered: in the 'real' world, the world outside the museum, the process embodies in the object-as-sign the physical traces of the life of the object - its form, iconicity, inscription (with the marks of use and abuse as well as of a more obvious 'linguistic' surplus) - whereas, in the museum context these signs of life are overlaid with those of a slow lingering death, a symbolic suspended animation, the physical impress of the museum process. Any further accumulation of information, therefore, is an embodiment of implied museality, the development of the form and physical characteristics of musealia (Figure 4.3.6.)

8. See above 3.2 Design: Epistemological Object. Figure 3.2.7 The Production-consumption model. And 3.3 Museum: Manifestations.:

*The process of selecting, preserving and recycling certain kinds of material culture and associated information ...justifies the position given to the museum institution in the Production-consumption model.*

The museum context may be distinguished from the 'real-world' context only in relative terms. The removal of the material cultural object from one or another complex location in the physical, social and documentary constellation of spatialities and its relocation in the realm of musealia represents one, admittedly rather peculiar, move-

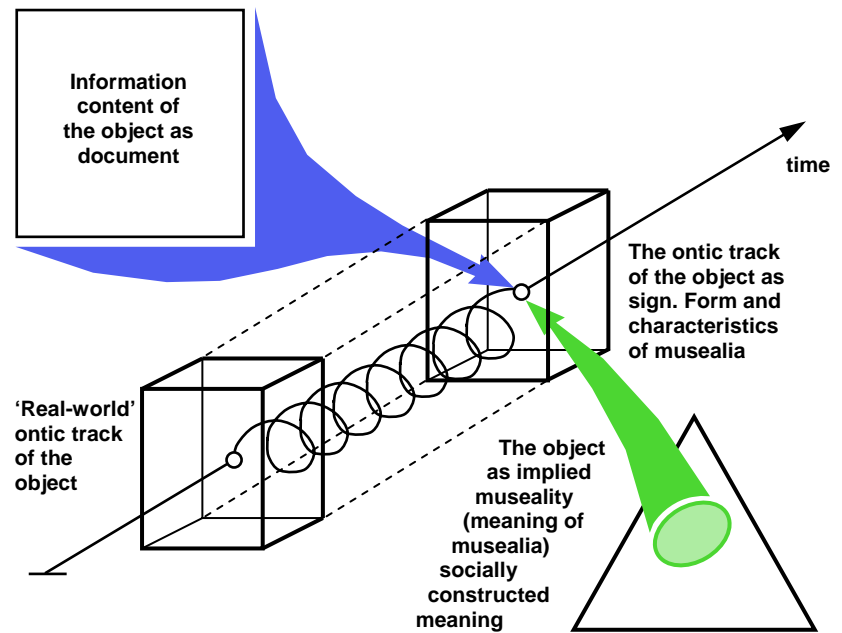


Figure 4.3.6

The object as sign.

ment amongst many possible movements during the 'life' of the object. If, instead of regarding the difference of the museum process as definitive, we regard its similarity as of reflexive value then it becomes one of a class of movements characterized by a complex relocation, a simultaneous discontinuity in several spatialities, and a rather different complexion is placed on the process. What we are interested in, as an exemplar of complex relocation, is the moment of transition itself, the radical renegotiation of a placement in physical, social and documentary spaces. This is not a moment in the synchronic sense, neither is it an event explicable in purely diachronic terms. The reconstructable fields of meaning rather are the interfaces between one state of being and another and are best visualized as pseudo-synchronic slices through one or another activated space.<sup>9</sup> Perhaps the most revealing is that of the object as implied museality. If one imagines a differentiation of the material cultural field, one that includes that being created (design) and that received from the past (site specific and

9. See above 3.1 Organization: Simplification and Adequacy for discussion of the practical impossibility of the synchronic moment.

moveable cultural heritage), one may visualize several layers of complex relocation each significantly overlapping the next in a series of pseudo-synchronic slices through a performative social space in which meaning is continually (re)constructed (Figure 4.3.7.)

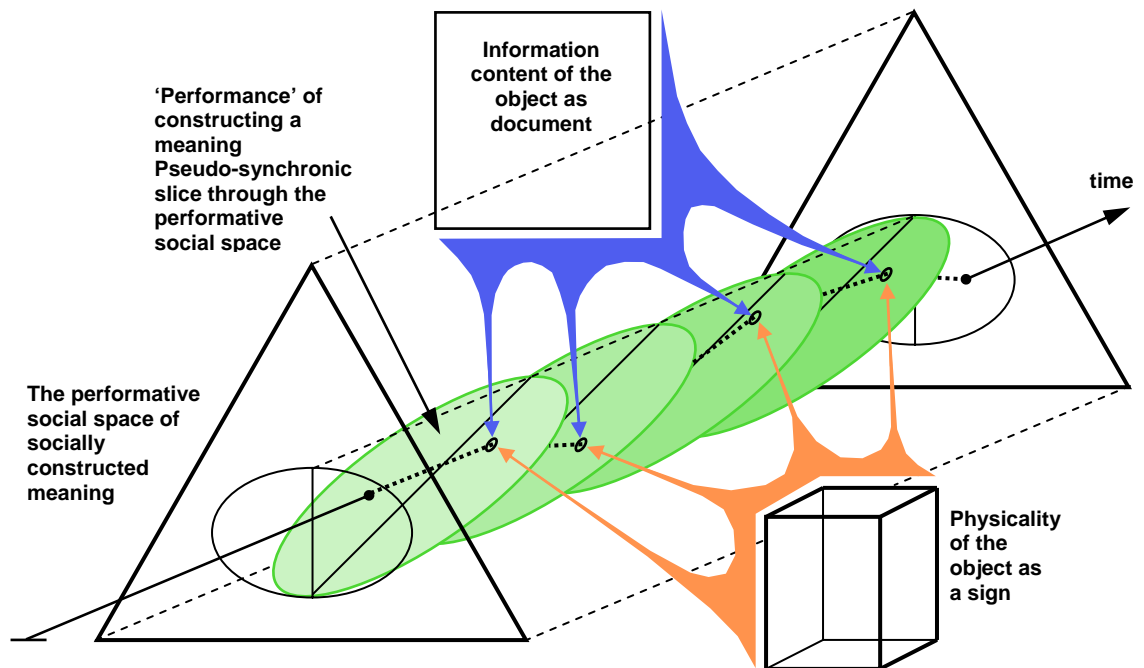


Figure 4.3.7

A series of pseudo-synchronic slices through the performative social space of meaning (re)construction showing the object's movement through several complex locations.

In the end it is because the museum process normally appears so definitive that it possesses a seminal organizational value. I will, therefore, introduce the term 'museal' to connote any organizational process of complex relocation in which an 'object' becomes the site of socially constructed meaning, is construed as a sign, and accumulates a special information content related only to the extraordinary organizational process.

### The Museal Organization

A museum acquires collection and archive material: every organization acquires people and things and information

10. Clearly an organization acquires accommodation, equipment and various inputs to the manufacturing or service process as well as personnel. The principles outlined here of documentation, preservation, etc. apply in much the same way to things as to people. I focus here on personnel for no other reason than one of clarity and in preparation for a reflexive turn at the end of the chapter - museums also have personnel.

11. The idea of a 'market' has, since the 1980s, become a commonplace in museum management and development. See, for example:

AMBROSE, Timothy & Sue Runyard (eds.) *Forward Planning: a handbook of business, corporate and development planning for museums and galleries*. London: Routledge, 1991. *The museum's corporate or organizational objectives are drawn up on the basis of the market intelligence available to the museum and on the basis of the assessment of the museum's overall operation.* [Ambrose, p.4.]

LEWIS, Peter. "Museums and Marketing" in THOMPSON, John. M. A. (ed.) *Manual of Curatorship*. Butterworth/Museums Association, 2nd edition 1992. pp. 148-58. and SILBERBERG, Ted. "The Importance of Market and Feasibility Analysis", in LORD, Gail Dexter & Barry Lord (eds.) *The Manual of Museum Planning*. HMSO, 1991. pp.53-70.

12. The terms 'material' and 'culture' have a variety of meanings in modern/postmodern discourse. I take my lead from the following amongst other sources: *'Material' in material culture*

about them.<sup>10</sup> In a museum the range and type of material acquired is determined by a view of the purpose of the museum. In this respect all organizations have a parallel problem, one of recognizing a particular purpose and of accumulating the material necessary to that purpose.

A particular aspect of or approach to material culture is deemed to be the proper province of a museum by reason of geography, patronage, cooperative agreement, competitive space or cultural policy.<sup>11</sup> And it seeks to acquire and to preserve both the 'material', the physical substance, of that material culture and the 'culture', the collective values and beliefs which it embodies and carries forward.<sup>12</sup>

All organizations are similarly identified and located by what they do and how they do it, and recruit appropriately qualified and skilled personnel and adequate physical and other resources to sustain their activity. The material and other resources may be transformed and passed out of the system as products, by-products and waste. But the human acquisitions, on the contrary, must be 'preserved' indefinitely. By its continued existence and functioning, it is the collective (collection?) that sustains the organization's defining activity, its purpose, and the identity that these project.

Once an item of moveable cultural heritage is made part of a museum collection the process of preservation and documentation continues indefinitely. Whatever primary function the object performs from time to time - specimen, document, display item, research object, conservation object, etc. - the museum is bound to sustain the object's movement through the museum process: it may not wilfully destroy or permanently dispose of the object. An unexhibitable painting cannot be taken to the municipal incinerator and burned: in one way or another it must remain in public circulation.<sup>13</sup>

*typically refers to a broad but usually not unrestricted range of objects. It comprehends the class of objects known as artefacts - objects made or modified by humans.*

SCHLERETH, T J. "Material Culture Studies: America 1876-1976" [p.2] in SCHLERETH, Thomas J. (ed.) *Material Culture Studies in America*. Nashville: American Association for State and Local History, 1982. pp.1-75. *...Sapir's famous distinction between a culture which embodies 'any socially inherited element in the life of man' and one which 'refers to a rather conventional ideal of individual refinement'.*

SAPIR, E. *Culture, Language and Personality*, University of California Press, 1949. pp.79-80, quoted in BAUMAN, Zygmunt. *Culture as Praxis*. London: Routledge & Kegan Paul, 1973. p.2.

[Culture] *...denotes an historically transmitted pattern of meanings embodied in symbols, a system of inherited conceptions expressed in symbolic forms by means of which men communicate, perpetuate, and develop their knowledge about and attitudes toward life.*

GEERTZ, Clifford. *The Interpretation of Cultures*. New York: Basic Books, 1973. p.89.

*'Culture' [is] now understood as a concept which reveals humankind's creative capacity.*

AUSTIN-BROOS, Diane J. "Introduction" [p.xx] in AUSTIN-BROOS, Diane J. (ed.) *Creating Culture*. Allen & Unwin, 1987. pp.xix-xxxi.

I also accept the tenuous existence of the concept of the cultural in our communication and speed obsessed postmodern condition in which:

*...the Faustian, Promethean (per-*

Similarly, the individual must be sustained within the scope of the organization's purpose, perhaps to serve a series of different functions, and the organization may not neutralize or permanently dispose of personnel: an inefficient electrician cannot be taken out and shot!<sup>14</sup> Preserving the material of a collection is an operation focussed on preventing its physical deterioration, on sustaining a viable condition. Such an operation relies upon an understanding of the physics and chemistry of material combinations and of the environment, and on a wise and skilful application of practical techniques.<sup>15</sup> Preserving the cultural is an operation with diverse possibilities. For example, it may focus on the process of documentation and have an encyclopaedic ideal or it may focus on the process of interpretation and value narrative coherence, purposeful communication, a comprehensible message above comprehensive information.<sup>16</sup>

Every organization develops a notion of what expertise is appropriate to its type and style of operation. Preserving the material aspects of its operation focusses on preserving the person as one of a network of actors in the organizational context, on sustaining the viability of the actor as an interactive and adaptable entity.<sup>17</sup> This operation relies upon an understanding of the physiology and psychology of the individual, an ergonomics,<sup>18</sup> and the total dynamics of the environment, an energetics.<sup>19</sup> One might assume, therefore, that an organizational design process should encompass and integrate both social and physical spatial disciplines in a creative practice.<sup>20</sup>

Preserving the cultural, a corporate identity for instance, is a multifaceted operation. Wally Olins draws our attention to the scope of corporate identity.

*... identity cannot simply be a slogan, a collection of phrases: it must be visible, tangible and all-embracing.*

*haps Oedipal) period of production and consumption gives way to the 'proteptic' era of networks, to the narcissistic and protean era of connections, contact, continuity, feedback and generalized interface that goes with the universe of communication.*

BAUDRILLARD, J. "The Ecstasy of Communication" [p.127] in FOSTER, Hal. (ed.) *Postmodern Culture*. Pluto Press, 1985. pp.126-34.

13. The disposal of collection items is a most delicate issue for museums. Difficult questions regarding the status and potential of an item must be thoroughly considered by a museum authority before a decision to dispose of an item may be ratified. An item may only be deaccessioned by transfer or sale to another museum or to an appropriate charitable institution such as a college or university. If these methods fail some museums are legally permitted to sell items to the public. However, in practice this is a very risky business invariably attracting professional censure and sometimes public condemnation.

14. Employment law prescribes the circumstances and the procedures for dismissal, redundancy and retirement. It is ironic that far greater efforts must be made by a museum to place an item in another public collection than must be made by any industrial, commercial or public service organization to place dismissed or redundant staff in subsequent employment. In the museal perspective perhaps we should be ashamed of the very concept of 'retirement'.

15. Although it is rather artifi-

*Everything that the organization does must be an affirmation of its identity.*

*The products ...buildings ...communication material [and] ... how the organization behaves.* <sup>21</sup>

It encompasses not only the outwardly visible, overtly visual, manifestations of an organization - its corporate image - but also the communicative style and the sense of community it generates largely as an internally experienced condition.<sup>22</sup> This operation relies upon an understanding of visual language and the development of a value-laden expression - an aesthetics - and the development of a narrative identity - an ethnology, a history, a mythology.<sup>23</sup> One might expect, therefore, that an organizational design process would also encompass and integrate creative visual practice and creative interpretive practices in the generation, preservation and exploitation of an archive.<sup>24</sup>

Objectified in these ways the 'material' and the 'cultural' are simply subjected to instrumental processes which give the impression of an unproblematic operational complex. However, in some respects the nature of the operation appropriate to a museum collection is highly problematic and, if we view the museum as a whole, as an actor network which includes both human and non-human actors, the relationship between material and expertise resists this functionalist drive. The interpretation put upon collection material - of its value, its proper place in the scheme of things, etc. - influences how it is treated in the physical sense. To the museum conservator, the material of a machine or a picture may normally mean the chemical compounds and their macrostructures which give the object its unique physical form. However, there are circumstances in which the mechanical function may be deemed to be the 'material' of a machine and the image the 'material' of a picture rather than, in each case, the

cial to talk of the conservation process in isolation from the holistic notion of curation, I am merely reflecting the common division of expertise in present day museums. The conservator has become, in the last forty years or so, a highly qualified specialist and recognized as such within the 'professional' curatorial community.

16. Again, although this is a rather artificial notion - it posits a duality which in practice is more a range of contingent possibilities - it is useful to note a commonly felt divergence in museum ethos. The encyclopaedic supranational professional neutrality upheld by such institutions as the British Museum is in tension with the overtly educational, inspirational, locally oriented and socially committed stance taken by institutions like the People's Palace Museum in Glasgow.

17. See above 4.2 The Design of Museum Design: Ideology, Programme and *Différance* and note 8.

*The actor network is reducible neither to an actor alone nor to a network. Like networks it is composed of a series of heterogeneous elements, animate and inanimate, that have been linked to one another for a certain period of time.*

CALLON, Michel. "Society in the Making: The Study of Technology as a Tool for Sociological Analysis", [p.93] in BIJKER, Wiebe E., Thomas P. HUGHES & Trevor PINCH. *The Social Construction of Technological Systems*. MIT Press, 1987. pp.83-103.

18. *Ergonomics has been defined as the scientific study of the rela-*

substances of which it is made. Such judgements are culturally contingent, determined by the values and beliefs we wish to carry forward in our works rather than by those contemporary with the object's genesis and past use, and belonging to the engineer, the manufacturer, and the operative, or to the artist, the patron, and the subject, or to their respective societies.

In any organization there is a temptation to abstract from the individual human actor a mechanistic definition of function and an iconic purpose and to treat these as the object of the organizational design process.<sup>25</sup> Such approaches ought to be seen as contingent and as less than ideal but are often regarded as unavoidable, as the norm. They are dangerous because they de-humanize the actor's position and make more likely a slip into inauthentic relations characterized by alienation and cruelty.<sup>26</sup> In an actor network the human may not be privileged over the non-human but this does not mean that the human may be treated as non-human.<sup>27</sup> If we may better understand certain technologies as extensions of the body and of the mind, and some of them as invested with an aspect of collective rather than or as well as of individual life/being, then the reverse is more the case. As, ultimately, there is no certain way to draw a line between the human and the non-human, perhaps we should treat all of the actors in actor network as significantly human.<sup>28</sup>

These judgements may also be simply ones of expediency: if a museum collection item cannot be preserved as a unique material complex, perhaps because component chemicals or physical structures are inherently unstable, then it may be possible to preserve it as a material analogue, a model, a copy, or as a virtual object, as an image, as digital information.<sup>29</sup>

Equally, if an individual cannot be sustained as a viable

-tionship between man and his working environment. In this sense, the term environment is taken to cover not only the ambient environment in which he may work but also his tools and materials, his methods of work and the organization of his work, either as an individual or within a working group. All these are related to the nature of the man himself to his abilities, capacities and limitations.

MURRELL, K F H. *Ergonomics: Man and his Working Environment*. Chapman and Hall, 1965. p.xiii.

An example of the focus on psychological and organizational compatibility and of an approach opposed to the dominant mechanistic determinism of industrial ergonomics - "man and machine, man as machine" - is provided in JACKSON, N. & P. CARTER. "The Ergonomics of Desire", *Personnel Review*, 14:3, 1985. pp.20-8.

19. Energetics as: "the total energy relations and transformations of a system". LONGMAN DICTIONARY OF THE ENGLISH LANGUAGE, Longman, 1984. p.484.

20. But, this is not normally the case: in theory and in practice, interior design (architecture) remain quite distinct from hard and soft systems consultancy.

21. OLINS, Wally. *Corporate Identity: Making business strategy visible through design*. Thames & Hudson, 1989. p.7.

22. If one accepts, given our postmodern uncertainties, the necessity of a cultural hermeneutics, as does Geertz, then what qualifies as local culture is an

actor in an organization then it may be necessary to define tasks and jobs, responsibilities and roles, that preserve a contingent functional need even if the individual or group upon which such a procedure is enacted is, as a consequence, made redundant or destroyed. It is not an uncommon feature in organizations for a 'post' defined by the absence of a former worker (resigned, retired, deceased, etc.) to remain vacant because a suitable replacement individual is not found and for the group surrounding the position to find imaginative ways of absorbing its functional aspects and dissolving its iconic purpose. Typically the post is then axed.

In the above the proposition is that any typical organization may be shown to have a 'museality'. By focussing on museality we see organization in a new light: as a process of collecting, of assembling things according to contingent rules, for the purpose of preserving an essentially materialist notion of culture. We see organization as reliant upon a process of documentation, of extracting and recording information about the objects in a collection, which uniquely identifies and locates those objects in a scheme of things. Research, the expansion of knowledge beyond that intrinsic to the object, becomes inextricably bound up with the process of documentation. As the social, political, economic, functional and personal attributes of individuals are revealed they are brought into an organizational nexus of mutual surveillance and therefore of control: with or without the enhancement of the new information technologies, organization is the archetype of self-regulation, the model of reflexive panopticism.<sup>30</sup>

Application of the panoptic principle to the museum has in the past focussed very much on the effect of creating a public watching over itself.<sup>31</sup> In this view, the



open question - what is local? And how local is local? Geertz seems to find acceptable the notion of an expressed 'communal sensibility' as qualification enough when inscribed in a specific system of signifiers that presents 'locally to locals a local turn of mind'.

GEERTZ, Clifford. *Local Knowledge*. New York: Basic Books, 1983. p.12.

Our initiation into a local culture could be said to involve not only rites of passage, ritual investments, a practical experience but also a 'turning' of the mind.

23. There is an argument here that the awareness that the individual within an organization may have of the visible and tangible aspects of identity is quite different in kind from that of the less tangible aspects. It is only when a person moves from one company to another that he or she fully realizes to what extent, and in what ways, the behaviour of one organization can differ from that of another. Codes of language, deference, gesture, and protocol may all be distinctive.

24. In this respect the work of corporate image designers parallels that of corporate interior designers in being quite distinctive as a discipline. The difference in practice is that development of the more prestigious corporate identity programmes tends to involve consultancies able to bring both organizational and visual expertise to bear on analysis and on concept and strategy development.

25. Foucault's studies of various institutions reveal this central theme in organization: bodies

museum, as a place of public spectacle, is seen as a model of self-regulating society. But perhaps this misses a fundamental point which is that a museum, as an organization that recognizes and reflexively utilizes museality, watches over itself - the museum, therefore, is a model of self regulating organization.

Under pressure of the panoptic principle, the operation of preservative techniques moves quickly away from a focus on the individual and takes on an overarching responsibility for the perpetuation of organizational life. Individuals become merely examples of a class of objects. Conventional orders take over from the creative possibilities of taxonomy - systems ossify, actors within them become petrified, both fearful and immobile.<sup>32</sup>

The history of museum farms can be seen to reflect the progress of organization.<sup>33</sup> The characterization above of the tendency of a maturing organization to fossilize as its operations become concerned with a general notion of self-perpetuation connects with two ideas. (1) A conservative tendency in the museological notion of 'conservation' 'Conservators agree that ideally all treatments should be reversible'.<sup>34</sup> And (2) a universal, teleological notion of organization in modernity.<sup>35</sup>

Up to this point the museal organization has been discussed primarily in traditional 'museographical' terms. The conventional theme of museum process as: collect > document > preserve > research > exhibit > interpret, and the implication of an order of priority in these functions, has been used to outline a scheme that reflects a functionalist conventionalism in organization. However, museography has changed (see 3.3 Museum: Discourses above) and much of the procedural prescriptiveness of the past, which attempted to be objectivist, 'scientific' and value-free, is

and minds are constructed, deformed, constrained and controlled against the claims of autonomy, identity, humanity.

What Lyotard defines as 'habit':  
*...an energetic set-up which is sometimes complex, of variable plasticity, which structures a certain type of behaviour in a certain type of contextual situation. The stability of the set-up allows the type of behaviour to be repeated with a significant saving of energy...*

is nothing other than this suppression of the human. In these terms what makes us human is our creativity, the capacity for 'habit-breaking'.

'Logos and *Techne*, or 'Telegraphy' in LYOTARD, Jean-François. [1988] *The Inhuman: Reflections on Time*. Trans. Geoffrey Bennington & Rachel Bowlby. Polity Press, 1991. pp.47-57.

26. *The strategy of organizational coordination is usually to minimize the human part to be able to increase control and predictability of actions.*

AHRNE, Göran. *Social Organizations: Interaction inside, outside and between organizations*, Sage Publications, 1994. p.36.

*Identities may be safe and 'unproblematic' only inside a secure social space: spacing and identity-production are two facets of the same process. But it is precisely the great modern project of a unified, managed and controlled space which has today come under such pressure.*

*As far as the prospects of safeguarding human lives against cruelty ...are concerned ... If anything does matter, it is ... the remoralization of human space.*

BAUMAN, Zygmunt. *Postmodern Ethics*. Blackwell, 1993. pp.234 & 239-40.

now open to a fundamental questioning of foundations.

If this section has emphasized a 'museographical' view, primarily of the collecting, documenting and preserving aspects, of the museal organization, the next will examine primarily the exhibiting and interpreting aspects of the museal organization insofar as they reflect a new museality - the new museology's focus on the necessity of contingent self-definition and continual re-creation.

## The New Museal Organization

In every museum we witness the genesis of a language, the structuring of a vocabulary, the organization of a grammar, the design of communicative acts. But this linguistic operation only appears so linguistic in written explication and in spoken exposition. This genesis, this organization, this design is also pre-linguistic. All notion of meaning and form is encompassed in the linguistic only by privileging speech acts above those of making and of imagining. And in equal senses we are witness to the museum's artificiality and gravity in its factoring and envisioning aspects in which spatiality may be actual or illusory, material or pictorial, that is, sensorial, rather than conceptual and intellectual.

The organization generally is no less the site of productive differences, of burgeoning differentiation and tension. In the material of this production a potentiality exists for an infinite realization of unpredictable states - intentionality, if it plays a part at all, plays the part of governing, comforting myth. In the structural relations of this production, therefore, the irrational underpins the rational - physicality and immediacy characterize the process of inscription (which becomes trivial) and interminable narrative play characterizes the process of encryption (which becomes 'vital') literally providing 'the signs of

27. Debate about the uniqueness of the human continues: machines already extend the body and the brain.

*Discussions about technology - its capacity, what it can and cannot do, what it should and should not do - are the reverse side of the coin to debates on the capacity, ability, and moral entitlements of humans. Attempts to determine the characteristics of machines are simultaneously claims about the characteristics of nonmachines.*

WOOLGAR, S. 'Reconstructing Man and Machine: A Note on Sociological Critiques of Cognitivism' [p.312] in BIJKER et al, 1987. pp.311-28.

28. Perhaps the animism that informs Japanese product design is more than a Shinto hangover. How long before machines share our deepest psychical qualities?

*...after a few years they might develop their own emotional responses - hate, love, fear, anger, envy - so they built in a fail-safe device ...a four-year life span*

The character Bryant briefing the blade runner on the latest generation of replicants (androids) in the film: *Blade Runner*, (Ridley Scott dir.) Warner Brothers, 1982.

29. For example:

- nitrate film is inherently chemically unstable and highly inflammable: the images are preserved by copying onto a modern optical or digital medium;

- most rescue archaeology destroys the bulk of the physical evidence uncovered: data collected on site can be used to produce a virtual 3-D model on computer and with the aid of record photography and in-situ casts same material can be physically reproduced in the museum.

life'. Organizations that realize their museality in this new spirit became flexible, able to reconstrue themselves at will.

In the museum great store is placed in the power of spatial relations, literally in the ranks of shelves and cases laid out and labelled in the space of the store and metaphorically in taxonomies, iconographies and narratives set out in the documentary spaces of the media. Each spatiality refers back to a centre, a hub, which, though all may be in motion around it, gives the appearance of stability, certainty, immutability. This centre is the measure of all things that may be spoken, made or visualized. This centre is the humanity to which the human pays automatic homage in the very act of being. Yet this 'centre' is not a focus: it falls outside the consciousness that binds linguistic, constructive and imaginative acts together. Derrida speaks of 'a centre which is not a centre' of an 'event' without location, of a 'rupture'.<sup>36</sup> In the museum this rupture contradicts the history of museality, and yet confirms its historicity. It speaks against a museality conceived as a teleology, as a motion towards the grand narrative, the crystallization of the sum of human knowledge in a massive superstructure which is the perfect mirror of the world (or its double). Yet it is always the absence of a supplement, merely a sampling of the world which shifts and plays in the space of museal contingency.

In the organizational microcosm physical space provides an arena for instinctual display, a contest of bodies, and for the controlling gaze in which all eroticism is banished - id and superego collide - and yet neither spectacle nor spectator (and each in realizing itself becomes the other) need any longer be 'present' to the other. Through the telematic power of communication technologies a substitution for the physical, a simulation of the transaction, and a fracture of structuring linear time have

30. GANDY, Oscar H. Jnr. *The Panoptic Sort: A Political Economy of Personal Information*. Westview Press, 1993.

31. BENNETT, Tony. 'The Exhibitionary Complex.' *New Formations*. 1988/4, pp. 73-102. and: HOOPER-GREENHILL, Eilean. *Museums and the Shaping of Knowledge*. London: Routledge, 1992.

32. *Under fear's unrelenting pressure, the rational self takes charge.*

FLAM, Helena. 'Fear, Loyalty and Greedy Organizations' [p.60] in FINEMAN, Stephen. (Ed.) *Emotion in Organizations*. Sage Publications, 1993. pp. 58-75.

33. See above: 3.3 Museum: Ideology.

34. PYE, Elizabeth. 'Conservation and storage: archaeo-logical material', in THOMPSON, John. M. A. (ed.) *Manual of Curatorship*. Butterworth/Museums Association, 1984. p.204.

35. See: HASSARD, John. *Sociology and Organization Theory*. Cambridge University Press, 1993. On the foundations of the modern orthodoxy: Auguste Comte whose: *...method is the basis for developing a grand 'positive' scheme for the reconstruction of society* [p.16]; Herbert Spencer who develops: 'an evolutionary typology of societies' [p.17]; and Emile Durkheim who believed that 'in time ...sociology will provide the rules of action for the future' [p.14.]

constructed the necessity of an 'economy of signs and space'. On the local level there is the possibility of

*a new logic of place and practical will-formation [developed] on the basis of decentralized data banks, interactive communication systems and community-based multi-media centres [or] ...a kind of Foucauldian power/knowledge dystopia ...in which even moral and practical knowledge is transformed into cognitive and technical systems which normalize and regulate what was previously private ...*<sup>37</sup>

and on the global level, in 'hollowed-out' nation states which, because of their inability to control information flows within their national boundaries, disappear between 'supranational or international bodies' and 'regional or local states or a private sector', there is the possibility of 'a more localist and pluralist democracy' or a 'nightmarish dystopia' of 'ungovernable wild zones next to highly disciplined tame zones, where each reinforces the other...'.<sup>38</sup> What is constructed in the organization is not straightforwardly a singular purposeful and productive 'body' – Lyotard's great Monad<sup>39</sup> – but a chameleon community in which each element is able to act as either origin or relay, and which is a sampling of the world that shifts and plays in the space of a 'museal' contingency. The museal is also that economy of signs and space. Any organization may display that chameleon-like adaptability which characterizes the designer and the museum as creative collectives.<sup>40</sup>

'Collection' implies either selection or serendipity: in both the totalizing drive is subverted, the mirror a distorting fragment, the imaginative double inseparable from its source. The world is everything including its own reflections, including their own reflections, in an infinite regress of deferred presences. Museality is the quality of all reflections that are caught in fragments of the reflected: museality is the condition of reflexivity made concrete, the

36. DERRIDA, Jacques: [1967] *Writing and Difference*. Trans. Alan Bass. Routledge & Kegan Paul, 1978. p.279.

37. LASH, Scott. & John URRY. *Economies of Signs & Space*. Sage, 1994. p.324.

38. *ibid.* p.325.

39. LYOTARD, [1988] pp.64-5.

40. See above: 3.2 Design: Design, Post-Design (and note 38) and 3.3 Museum: Institution.

past enfolded in the material of the present: it is the structure of structuration, the history of historicization, the culture of cultivation, the image of imagination.

Beneath the articles of legislated museality (collect, document, preserve, research, exhibit, interpret), which attempt to be labels for objective procedure, we are dealing with the covered, *unrecovered*, aspects of all material organizations - their ironic presence to themselves, the enigmatic quality of their identities, and the paradoxical relations between their notions of change, purpose, location and integrity. If we ask what ironic presence the museum has to itself, we mean that which it achieves through the communicative complex of collection and media, the physical space of curation and the curated: through exhibition. Exhibition is public play, a spectacle, a space in which a ritual observance is enacted, the material embodiment of cultural values is projected into the space of a public watching over itself and thereby called into play as an order of knowledge and power. As an internal organizational conceit, a rhetorical contrivance, exhibition achieves its status through a combination of privileged location, authoritative style, distorting form, contingent structure, symbolically indeterminate material content and distracting (entertaining) surplus. Materiality is covered over in the museum process and its unrecoverability ensured in the process of exhibition which, whatever else it may be, is a process of fulfilling a present-day politicized agenda that calls for commodity and inheritance to be assigned the symbolic aspect of property and knowledge. But materiality is covered over in all organizations to the extent that the collection of resources, human and otherwise, involves a rupture. The acquisition is objectified in the documentary process: its provenance frozen and its significance changed. It becomes, at least symbolically, a possession, a

property, whose newly defined purpose binds it to the organization and simultaneously suppresses its extramural significance. The exhibitionary process of structuring purposes therefore is also one of layering meaning and of constructing (recreating) organizational integrity.

The enigma of museum identity in the postmodern context is that the public face of the museum - the exhibition - not only can, but must, radically alter its form, structure, material and content, and the very values and beliefs it makes explicit in its play of *différance*, to sustain the identity of the museum *qua* museum. And the more interactively it is able to achieve its own repeated transmutation the more the new museality is confirmed: this museality is an interpretive potential, an unlimited power of signification.

The organization's image is no mirage. It is an artifice of ephemerality - it changes by zooms, pans, fades and cuts and responds to the touch like interactive video - and it is projected by the actor network that exploits its possibility for imaginative transformation. The idea of structural relations becomes a paradox as the space of organization is defined as a dynamic, open-ended process of design, which is, in generic terms, that endless play of *différance* required to keep alive the possibility of meaning, structure, and utility.

One of the key impetuses in new museology, as far as attitudes to collection are concerned, is the open-ended search for new possibilities in the relations between individual items. Polyvalency emerges as the characteristic linguistic object of exhibition and interpretation: the notion that an individual item or a contingent grouping of items can serve several simultaneous semantic purposes, some of which, rather than being prescribed, are offered as interpretive possibilities. In the museum the implication is that it is neither desirable nor actually possible to put a firm

boundary around the meanings that may be communicated by a particular exhibit let alone by a whole exhibition.

In general the characteristic of museal organizations is that the actor network is polyvalent. Therefore, it is equally undesirable, in fact impossible, to clearly identify what is inside and what outside. The museal organization is a system of interfaces: boundaries are at its focus, therefore, it has no centre, in a sense its 'integrity' cannot be 'placed'. The museal organization only has customers, clients, insofar as they became participants, collaborators, actors in the actor network which is the projector of the organization's succession of appearances. The unexpected is expected, the unusual commonplace: the 'proper business' of the museal organization is never stated except in the full knowledge that it may be contradicted by what happens next. Rather than existing as a promotional basis, a teleological normativity, it effectively remains unconstituted until catalysed and completed by a supplement unique to each customer/client.

The process is identical in the museum: the exhibition visitor is presented with a layered complex of meanings in a 'text' some of which are susceptible to a direct linear reading, some of which are not. The latter must be constructed rather than reconstructed: they present themselves as unresolved possibilities, fragmentary and perhaps, on the surface, contradictory narratives that can only be completed (closed) by a supplement unique to each visitor or group.

The admission of this polyvalency allows the individual item many possible positions in the scheme of things, and creates, alongside the polyvalency of all other individual items, many possible schemes. A symmetrical uncertainty of identity and narrative is the result. To some extent, therefore, all that one can do is to put things together, with or without a strong rationale, and wait to see what

meanings arise, what purposes are served. Total open-endedness is, of course, not possible. Regardless of our attempts to eliminate them, we bring preconceptions and personal projects to bear in any situation that requires organization. But, at the end of the day, what matters is that some degree of possibility is admitted that ensures the occurrence of the unpredictable and makes probable its utility. Collection is not a random process, but neither can it be guided by a comprehensive specification or qualification. The item acquired because it conforms to a range of criteria set out in a collecting/recruitment policy is not as a consequence circumscribed. Documentation and research will reveal many qualities other than those qualifying the item for inclusion in a collection. It is these other qualities which ultimately take the possibilities of a collection beyond the predictable, which introduce a complexity and the scope for endless reconfiguration in exhibition and reinterpretation. The unorthodox configuration of individual items in a collection creates the narrative possibilities but in the process it necessarily redefines and recreates identity. It is not only what the museal organization collects and what it reveals through exhibition - the visible, tangible aspects of identity - that are open to change, but the very processes of exhibition and interpretation themselves: identity is also a question of how the organization chooses to behave towards itself, for there is always a contingent directionality in any interface, towards consumer and non-consumer groups (visiting and non-visiting public), other organizations, and towards the physical space it occupies and the material/culture under its care.



## 5.0 Force Fields and Constellations

### Complexity, Praxis and Interpretation

In museum-design-organization the intervals organization-design, design-museum, and museum-organization construct a fascinating realm of possibilities for the postmodern condition. In this realm complexity is exhibited in its most radical form: the epistemological, the conjunction of incommensurable problematics - psychological, social and material. Action and theory are irredeemably bound into a creative nexus which effectively dethrones the sovereign rational subject and centres play at the boundaries between imagination and reason, vision and speech, making and writing, inscribing and encrypting. Explanation is freed from the *telos* of 'truth' and revealed as the continuous creative process of negotiating and shaping the world through our conversations and envisionings.

If our situation is characterized by complexity, incommensurable frames of reference, and by the need to forge narrative and identity out of our dealings in this messiness, if difference, in the anthropological sense, is necessary to life, then change is a Janus-faced project and it is *the* challenge.

The process of globalization engages a superficiality of change but with increasing speed. In this sense, the putative homogenization of material culture should diminish the resources available for transforming the world, for creating new narratives and new identities. It should lead to an implosion. Against this, however, the process of differentiation, of localization, proceeds ever more slowly into complex layered change in which the possibilities for material culture become energized. This should lead to an explosion. We travel in both directions simultaneously: our

location and speed, like those of the lonely electron, are governed by an uncertainty principle of sorts. Culture is sustained only by continually putting itself at risk, by changing its form and content, its material and meaning. But, the extremes of the process of change do have to be avoided: relapse into chaos or push complexity too far and difference, perceivable pattern, meaning, disappears.

In this chapter I draw out a range of constellations in the preceding material to set up a thematic triad of force fields. (1) The surfacing of complexity in the human situation reflects most permanently in the material culture and ultimately this is the process that defines the designerly and museal responses as ones which are characteristically human. The challenge of change is to engage the museal and the designerly in a continuing play of difference. This defines a praxis in which the material cultural focus presents a simultaneity of psychical, social and physical realities and, therefore, touches individual and collective existence through every channel. (2) As an engagement of the whole being in a process of preparing for future well-being, design is a form of praxis not opposed to but continuous with that similarly all-consuming process of connecting with the material past. The praxis thus conceived as both designerly and museal is both forward and backward projecting and yet its moment is here and now. Museality must also be projected forwards, a process achieved through design. And design must connect with the past, a process achieved by the museal. The moment in which we find ourselves is thus a place identified by the cross flow of energies, the eclecticism of our interests and concerns, and the ironism of our actions. (3) We have the possibility of continuously transforming any constructed order and any image of order, a process which makes interpretation integral with action and, therefore, both interminable. The

question of interpretation arises primarily because at the 'moment', at that constant turning point between the backward- and the forward-projecting energies, at that meeting point of the material culture which has survived its present and that which has yet to be realized, we have the possibility of seeing an order in our situation and of acting upon the meanings we thereby construct. Transformation is immediately a process that can be applied to this project.

Any idea of organization is ultimately the comfort of the meaningful, in a profound sense, of the 'familiar'. There is magic in all of this, more than there is science or faith.

## 5.1 Complexity and the Design Paradigm

### Designer as Paradigmatic Existent

Design, as an arena of human knowledge and praxis, shares with existentialism a key epistemological point of departure and that is the discontinuous nature of our knowledge of the world. We are limited by the possibilities of our own experience and at the same time bound to act upon what we know however incomplete that knowledge may be. 'In the existentialist view there are always loose ends. Our experience and our knowledge are always incomplete and fragmentary...'.<sup>1</sup> The proposition that existentialism lacks any 'common body of doctrine' leads Macquarrie to treat it 'not as a "philosophy" but rather as a "style of philosophizing"...' and this also makes existentialism important in another respect: as a pointer to methodological principles. The first principle must be that the designer, like the existentialist, operates 'not with the reason only, but with the will, with the feelings, with the flesh and with the bones, with the whole soul and with the body.' Whereas in the bulk of subjective theory the human is, first and foremost, the 'thinking subject', in existentialism and, as I maintain, in design the existent is also 'an initiator of action and a centre of feeling'.<sup>2</sup> Moreover he or she is also the creator of images, a visionary, a point often understated or overlooked in existential works. The distinguishing characteristic of humans which is pointed up by this orientation to theory is that of purposefully exercising choice in visualizing and shaping the future: 'It is the exercise of freedom and the ability to shape the future that distinguishes man from all the other beings that we know on earth'.<sup>3</sup> And in placing and identifying themselves in relation to the past: '...every act we take, every plan we make, entail the past's more or less conscious re-evaluation, revision, and recreation'.<sup>4</sup> In a

1. MACQUARRIE, John. *Existentialism*. New York: World Publishing, 1972, p. 1.

2. *ibid.* p.2 & 3.

3. *ibid.* p.4

4. LOWENTHAL, David. *The Past is a Foreign Country*. Cambridge University Press, 1985. p.412.

fundamental sense, therefore, existentialism and design hold important correlational attributes and, although the picture cannot be completed by extrapolating from such a limited range of ideas, we can pursue a certain aspect of theory by manipulating and reinterpreting dimensions of the model of museum-design-organization to help us to visualize and to cope with the personal, the interpersonal and the communal - all areas which have been explored from an existential point of view.<sup>5</sup> The complexity of the human situation surfaces in the breadth of the designerly and museal responses.

Although the phenomenological, structural and material problematics may not be synthesized in any account, even the existentialist one framed here, this is not a particular worry. The approach allows one to explore the epistemological complex as a constellation of accounts which one hopes may be adequate to one's practical purposes at the end of the day, or at least that points in a hopeful direction. What is clear is that the subjective focus on the existent does not lead to a common body of knowledge nor even to shared beliefs and values: the existentialist approach is as capable of reaching a totalitarian as it is an anarchistic interpretation of the individual's scope for 'freedom, decision and responsibility' with all of the implications these extreme possibilities hold for the political sphere.<sup>6</sup> If we can see the following focus on the designer as 'paradigmatic existent' in the above light we can bely the desire to grasp at an encompassing interpretation of any sort in the hope of picturing the perceptual process involved.

The most revealing existentialist works explore the tragic aspects of human existence: the tenet in such works seems to be that by considering our failings and our failures we learn more about ourselves and about our relationship to the world than we do by tracing human teleology.

5. *ibid.* Macquarrie cites, for example, the 'near-existentialists' Martin Buber and Gabriel Marcel as having been 'pioneers in the investigation of interpersonal relations'.

6. Camus explores both the fascist (ab)use of Nietzsche's nihilism and the 'secular Jesuitism' of modern socialism in *The Rebel*.

CAMUS, Albert. [1951] *The Rebel*, trans. Anthony Bower, Hamish Hamilton, 1953.

## The Moment of Design

The immediate social context of a design provides the individual designer with a range of uncertainties as to status, behavioural and cultural norms, power relations, and personal freedom. These define a worldly regime against which the designer may have little option but to react at a metaphysical level. The inevitability of this response arises out of a contradiction that surfaces in the idea of 'Design'. The professional sphere of design activity is bounded by the legislated expectations of the institutions - professional bodies administer their communities through the imposition of ethical codes; determination of 'legitimate' and 'criminal' practices is embodied in law; procedure is conventionalized to facilitate communicative and productive activity within and between organizations; and various informal (and potentially vicious) sanctions may be waged against those whose appearance, utterances, or gestures offend the group or the powerful. Design is also intimately connected to the broader humanistic concern for purposeful and meaningful creative activity which is generally implicit in the expectations projected by literature, material culture, and the media. Design is a contested phenomenon. The designer is caught between cultural reflections of faith in human creativity and its bureaucratic instrumentalization. The tensions and counteractions of liberatory and regulatory forces, therefore, are immanent in Design, and their inescapability gives the designer good cause to engage in, what Camus described as, 'metaphysical rebellion', a reaction, not 'against the condition of his state of slavery' but 'against the human condition in general'.<sup>7</sup> What is of interest here is not the reaction catalysed by the context of a particular design, but rather, the general condition that sets the 'right' of conscious

7. *ibid.* p.29.

individuals to exercise their practical creative competence in an increasingly complex and unsatisfactory world against the administrative strictures of 'modern' society which regulate when, how and why designerly interventions may be made. The only alternatives to metaphysical rebellion are acquiescence, silence and impotence, and the deep feelings of resentment, alienation and guilt that inevitably accompany such responses.<sup>8</sup> The existential question is a bold one: is the designer to engage hopefully in visionary projects or to be the slave of circumstance?

### Being at the Turning Point

The first moment of design is that which marks the beginning of dialogue. A dissatisfaction with the state of things, however defined, becomes the locus of potentiality, the pregnant pause, the point of fracture in material conditions that demands the making of two world views. Whether as a response to catastrophe or as mere whim, as technological breakdown or as a shift of fashion, the realization that something needs to be changed - even though there may be some dispute as to what that 'something' is or even that there may be no real idea of what 'change' may actually mean, only a general unease about the current situation - calls for a different construction to be placed on the practical situation.<sup>9</sup> The situation 'as it is' must come to be understood in a new way if it is to become amenable to intervention. In the first instance, the drive to see the situation differently is formalized in engaging the designer. The designer, whether as an external agent brought in to the situation or as a latent capacity of the existing actor network, is able to expand the 'point of potentiality' into a full-blown 'arena of possibilities', to engage the visionary aspect of change, to explore the play

8. *To keep quiet is to allow yourself to believe that you have no opinions, that you want nothing...* ibid. p.20.

9. See above 2.2 Social Space: (concluding paragraph): the ideas of the prophylactic, the therapeutic, and the innovative practical situation in: GASPARI, W. 'On the General Theory (Praxiology) of Design', Department of Praxiology, Polish Academy of Sciences, 1985?

of *différance* - what Husserl calls the process of 'free variation' in phenomenological investigation.<sup>10</sup> The process of constructing a view of the situation 'as it is' and of opening up the situation and seeing it 'as it could be' engages the interpretive aspect characteristic of identifying the museal - one selects a metonymic sample from the multiple forms available and identifies a metaphorical potential - and the imaginative aspect characteristic of exploratory design thinking. But this achievement is necessarily different to that implied by the idea of engaging a process to intentionally change a situation. There is a limit to the scope of our intentions in any practical situation, a limit to their affectivity. It is when we realize that intended outcomes are unstable or occurring in unpredictable ways or failing to occur at all, that we may conclude that it is the practical situation itself, and not necessarily our knowledge and our ability to apply it, that has failed. Change *per se* is no longer the problem: change as an inherent quality of necessarily dynamic practical situations may be managed. The problem has become one of changing the arena of change in order to establish a new pattern of persistent dynamics. This kind of change can not be 'managed', in any straightforward sense, but rather has to be 'designed'. A concept of what is to be changed and one of what change is to be made are developed together as the complementary aspects of a single design proposition and their difference constitutes its meaning. 'What is to be changed' describes an interpreted, to some extent arbitrarily delineated, practical situation: being framed one way rather than another, including some elements and not others, it is socially constructed to coincide with a concept of 'what change is to be made'. Rejection of one is automatically a rejection of the other. In a very direct way the projection of a future identity depends upon a parallel projection of a narrative

10. ...the phenomenologist refashions the given data of an object - say a table - by freely varying it in his imagination ...In so doing, the imaginer becomes aware of all the possible variations which the identical phenomenon of the table may be subjected to; and such an awareness culminates in the intuition of a general essence of tableness.

KEARNEY, Richard. *Poetics of Imagining: from Husserl to Lyotard*. Harper Collins, 1991. p.24.



past – ‘direct’ because the medium that embodies the dependence and lends an infinite renewability to the process is the material culture (Figure 5.1.1. )

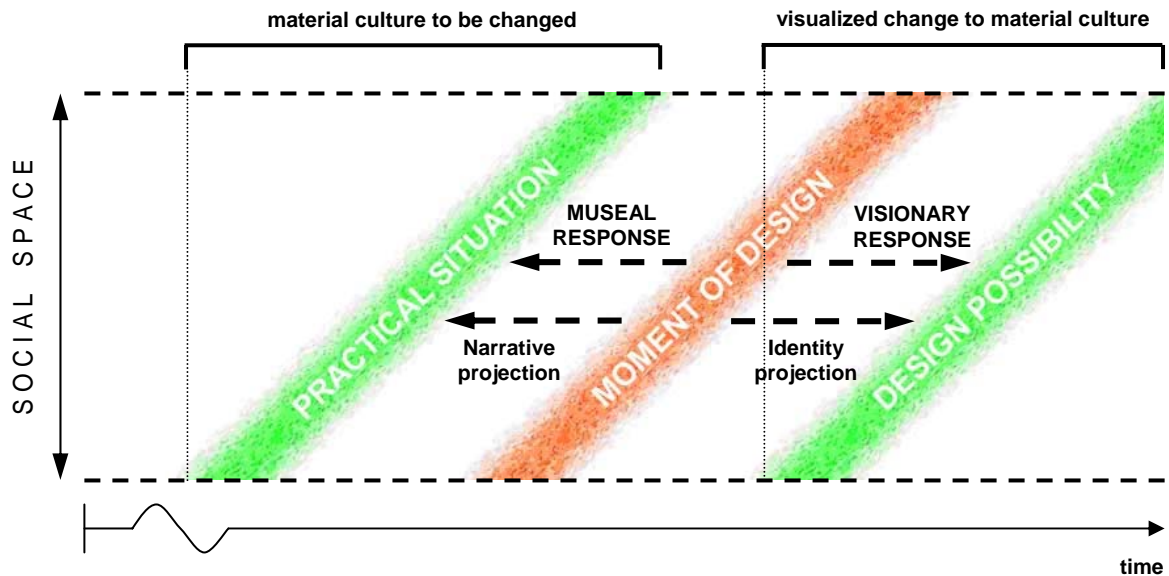


Figure 5.1.1

The museal response of retrospective narrative projection reconstructs the practical situation to be changed in the same moment (the moment of design) that the visionary response of imaginative identity projection constructs the design possibility. The reconstructed practical situation, the moment of design and the visualized change are pseudo-synchronic slices - through the social space and to greater or lesser extent they overlap in time.

11. Lowenthal explains how we know the past in terms of memory, history and relics.

LOWENTHAL, 1985. pp.185-259. The selectivity of all of the contributing processes attenuates the information content imparting the mythic quality to our guiding narratives.

JACKSON, N. & P. CARTER. 'The Attenuating Function of Myth in Human Understanding', *Human Relations*, 37:7, pp.515-33. 1984.

*...it is precisely where memory diverges most clearly from fact that 'imagination, symbolism desire break in'.*

PORTELLI, A. 'The Peculiarities of Oral History', *History Workshop Journal*, 12, pp.96-107.

The task calls upon an artificially constructed evocation of those fundamental human traits of (1) organizing the future by making plans for change and (2) organizing the past by making up stories to explain who we are and where we came from. The former involves intervening in a situation as if from outside, of successfully acting on a situation without or despite inside knowledge of its history, condition and dynamics. The latter involves a selective remembering, a selective telling and/or writing and a selective keeping of things which together make the functional myths by which we live.<sup>11</sup> In this sense the designer is always a kind of 'outsider' - the other within ourselves - and the influence of the outsider is profoundly unsettling because it engages a compulsion to leap into the unknown:

quoted in SAMUEL, Raphael and Paul Thompson (eds.) *The Myths We Live By*. Routledge, 1990. p.7.

*It is not enough to accept a concept of order and live by it; that is cowardice, and such cowardice cannot result in freedom. Chaos must be faced. Real order must be preceded by a descent into chaos.*<sup>12</sup>

And the designer is also a kind of priest ...

In the sense that the effect either of analysis or of conjecture is to bring into question, and ultimately to dismantle, the internal relations that comprise the structure and meaning of the familiar, Design is at first destructive.<sup>13</sup> This redefining and reconstruing process involves loosening our grip on reality. This is a fearful and potentially dangerous exercise. The 'knowledge' it calls upon is no resort to hard evidence, probability, or natural law: rather it is an act of faith in one's own and in others' capabilities.

*I think crazy people are all different ...but they all have one thing in common: they can be creative ...you just have to give them confidence. I think everybody has got it in them, you just have to give them an environment, an atmosphere, in which you encourage them to believe in themselves and they can go out and achieve the impossible. ...I don't think more than once or twice about the fact that they could or can't do it. they're there, I believe they can do it, and so I assume they can!*<sup>14</sup>

12. WILSON, Colin. [1956] *The Outsider*. 2nd edn. Pan Books, 1963. p.58.

13. 'Analysis' and 'conjecture' being the opening gambits of Systematic and Kuhnian processes respectively. These stand for the 'hard' and 'soft' extremes of the methodological spectrum. See: Figs. 2.3.4 and 2.3.5 above.

14. Gary Withers, Creative Director, Imagination quoted in a video interview at *The Tom Peters Seminar* (London, 1993.)

Not only does the designer experience the fear and danger inherent in shaking the ground upon which a practical situation rests, through the unpredictability of the design process, the client and the participant user feel a threat is posed to the world they know. In the face of such uncertainty they rely upon institutionalized procedure to protect the social fabric from being 'conceptually', and perhaps 'actually', unravelled. Design is engaged but not unreservedly: limits are placed on the scope and speed of action and boundaries are set up and protected with all the force that can be mustered. A museum may be radically reorganized in the process of change, but it may not be dissolved into

something other than a museum - a recycling plant, for instance. Even if a free-ranging design process might identify the rationale for such a change, the possibility of its specification and implementation is literally 'ruled' out. The adventure is a free fall into confusion - a state of doubt about the local pattern of forces that hold a practical situation together as a comprehensible and functioning environment. When our faith in the coincidence of outward appearances with their material and social consequences is shaken not only do we become disorientated we become isolated. When the emotional continuity of perception and objective knowledge is severed we suffer the existential moment of angst and alienation. From the designer's point of view such a moment is all consuming; detachment is not an option. The most potent symbolic instance of this terror is that of facing a blank sheet of paper whilst charged with energy and devoid of vision. Practical reasoning, in the Philosophical sense, offers no way out of such imaginative paralysis. Only two paths are open: (1) a slavish expression of conformity to precedent, preconception and prejudice which is an admission of defeat, of subservience to the other, of less than human quality, of a willingness to be subject to instrumentalizing bureaucratic power; and (2) a defiant refusal, a headlong dive into chaos, an intuitive outpouring that defers any thought of establishing coherence, pattern, structure, meaning. This amounts to an absolute act of faith in one's own humanity - a momentary egoism of monumental proportions in which the individual 'knows' that designerly skill will ultimately prevail over the resulting chaos.

The late James Gardner, the internationally renowned museum and exhibition designer, calmly post-rationalized his strategy for coping with the crucial moment during the Evluon project:

*I will use well understood images as they come up in my mind, but arrange them in unexpected contexts ...surprise focuses the mind. It may even focus mine.*<sup>15</sup>

The strategy relies upon the designer's ability to withdraw from the practical situation in which an attachment to the existing world view holds sway. Although one comes to any situation with one's preconceptions and prejudices intact there is a need to suppress the inclination to give in to them. It may not be possible to release completely, but unless something of the vacuum they fill is faced then nothing surprising, nothing potent, nothing of fearful potentiality will ever be brought to the surface. The question here is one of Being-first, of identifying with the moment through the passion of the senses and through an intensity of action. The ironic quality of Being-first is apparent in the implied contradiction between the ideas of 'conscious' and 'self-conscious' states of Being. In the intensity of imaginative involvement one is most fully conscious because most fully immersed in the dynamics of the moment. When all the senses are engaged, when one acts 'with the whole soul and with the whole body' one is most alive and yet in that very moment one is least conscious of the self. Self-consciousness implies a distance from the actualities of existence, a rationalized separation of the acting self and the thinking self, of 'existence' and 'essence'. Self-consciousness is entirely missing in the existential idea of existence. Sartre emphasizes the precedence of this idea of existence over that of knowing-consciousness by saying that:

*...consciousness is the knowing being in his capacity as being and not as being known. ... Of course consciousness can know and know itself. But it is in itself something other than a knowledge turned back upon itself.*

15. GARDNER, James. *James Gardner: The Artful Designer*. (Pub. the author), 1993, p.315.

Evluon is the Philips sponsored science museum near Eindhoven, Netherlands, opened in 1975.

*The immediate consciousness which I have of perceiving does not permit me either to judge or to will or to be ashamed. It*

*does not know my perception, does not posit it; all that there is of intention in my actual consciousness is directed toward the outside, toward the world.*<sup>16</sup>

In the moment of designing one has an immediate consciousness only of the object of designing, one does not know oneself as designing. In fact, such a self-consciousness would defeat the object of designing by reducing the activity to one distanced from the actuality of the situation by a reflective practical rationality. It is this distancing which is able to paralyse the imaginative faculty by allowing the space for feelings of self-doubt, anxiety, fear and guilt.

There is then a radical sense in which the reconstruction of reality is a creative rather than a re-creative process. And at this point we can return to the problem of the boundary which, as the site of difference, is the generator of meaning and, in its eternal renegotiability, the space of the play of *différance*, and relate this to the situating of the designer in cognitive terms.

### Boundary as generator

As noted earlier, Cooper succumbs too easily to the gestalt fallacy which is questioned by Ehrensweig in *The Hidden Order of Art*.<sup>17</sup> The division between terms in the process of differentiation indeed generates, without privilege, both system and environment, which are reversible in position analytically. However, this process is symmetrically opposed to the dedifferentiating view that must be adopted later in the larger design process. Once the focussed attention has encompassed both figures of system/environment and environment/system the realization of boundary-as-generator closes off this to and fro activity and, to facilitate the creative process of boundary manipulation, a process of intellectually achieved release must take place.

16. SARTRE, Jean-Paul. [1943] *Being and Nothingness*. Trans. Hazel E. Barnes. Methuen, 1958. Routledge paperback edn. 1991, pp.xxvii & xxix.

17. See above 3.1 Organization: Boundary. refs: COOPER, R. 'Organization/Disorganization' *Social Science Information*. Sage, 25, 2, 1986, pp.299-335. and EHRENSWEIG, Anton. *The Hidden Order of Art*, Weidenfeld & Nicholson, London, 1967.

This intellectual release is experienced as a process of dedifferentiation. In it, the gestalt reintegrates with the boundary in place but unfocussed to a degree that brings system/boundary/environment into syncretism. The sustained condition of unfocussed attention allows the dedifferentiated field to be held in view whilst changes are wrought on previously determined elements such as boundary features. Whilst, during the manipulative process, the detailed local effects cannot be focussed and thus analytically evaluated the impact on system/environment and environment/system relationships can be viewed 'holistically' as a gestalt shift.

In the design process, therefore, what is required is the development of an intellectual discipline and an imaginative skill that facilitates development of designs through alternating differentiating processes, which involve focussing attention, description, structuring, analysis and evaluation, and dedifferentiating processes, which involve releasing attention, boundary blurring, disintegration and intuitive exploration (Figure 5.1.2.)

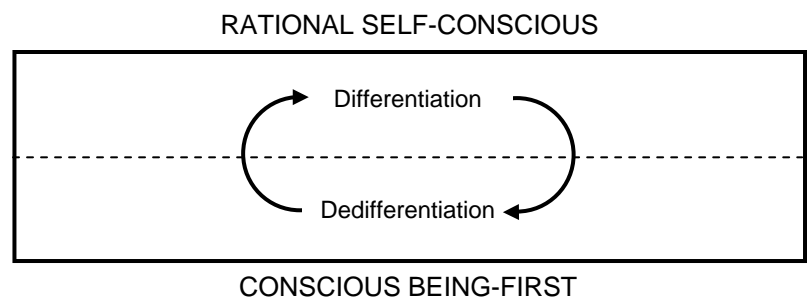


Figure 5.1.2

Alternating processes of differentiation and dedifferentiation in the design process experienced as the focussed attention of the rational self-conscious and the unfocussed attention of the conscious Being-first respectively.

It is this movement in and out of these differentiating and dedifferentiating modes that, from an existential view point, constitutes the design process. The necessity of this

movement in the design process becomes, in an interpretive sense, 'rational', that is 'reasonable', when we observe that the manipulation or reconstruing of one difference within a system inevitably sends shock waves throughout a structure infecting a larger or smaller proportion of other differences with a change factor.<sup>18</sup> Without a dedifferentiating mode the complexities of detailed change rapidly overwhelm the existent's (human actor's) field of view with the appearance of catastrophic disintegration of established (familiar) structure. With it, focussed attention is resisted, local effects suppressed in importance, and shifting patterns grasped as a whole. Redescription and restructuring are postponed until that moment when relative gestalt stability returns: redifferentiation is then begun generally by working from the larger structures down to the smaller more localized ones. Thus, radical change becomes, if not intellectually then at least emotionally and perceptually, manageable. In addition, existential notions of 'rational self-conscious' and 'conscious Being-first' can be associated with the differentiating and the dedifferentiating modes of attention respectively - the rational self-conscious separates subject from object, as well as figure from ground, and system from boundary and from environment whereas conscious Being-first entails an identification of subject with object and a blurring of the field of figure/ground, and of system/boundary/environment (Figure 5.1.3.)

The ideas which Ehrenzweig explores in relation to visual art might seem at first sight not to apply to the general case of practical thought, particularly that which is normally portrayed as purely linguistic in content. But visual thinking is far more prevalent than is credited by the dominant cultures of philosophy, politics and literature (it serves their power plays to raise the linguistic to a privileged position), indeed, the visual comes before the

18. In Eco's terms, this constitutes the genesis of an infinite semiosis.

	RATIONAL SELF-CONSCIOUS	CONSCIOUS BEING-FIRST
Mode of attention	Differentiation	Dedifferentiation
Subject-Object relation	Separation from	Identification with
Meaning production	Pattern of difference	Play of <i>différance</i>
Cognitive status	Thinking- <i>about</i> -doing	Thinking- <i>in</i> -doing
Cognitive processes	Description, structuring, analysis, evaluation ...	Boundary blurring, imagining, intuitive exploration ...
Dominant psychological functions	Thinking - feeling	Intuition - sensation

Figure 5.1.3

---

Contrasting characteristics of rational self-conscious and conscious Being-first experience of the design process.

---

linguistic and interpenetrates every aspect of its functioning; that is, the linguistic is, in a radical sense, cognitively subservient to the visual. This can be argued strongly for practical thinking, and weakly, but none-the-less, persuasively for theoretical thinking.<sup>19</sup>

When viewing the object of design as a linguistic phenomenon, it is important to recognise that the implicitly static view of the system that use of the Saussurian term ‘difference’ implies is a deliberate *faux pas*, the point is that the use of the Derridian term ‘*différance*’ is contrasted with the previous term in a new way in relation to the outline of design process. In the differentiating mode differences are apparent and acted upon: in the dedifferentiating mode all differences are deferred and therefore a play of *différance* is engaged. There is an important sense in which the self-conscious, differentiating mode of attention is one which deals in expressible terms, in the illusion of stable language. It is in this mode that one can think about what one is going to do and about what one has done: to the extent that one is aware of a present - a pseudo-synchronic ‘moment’ - one can even think about what one is doing and, in Jungian terms, the flow of libido is inwards: an introversion or

19. ARNHEIM, Rudolf. *Visual Thinking*. Faber & Faber, 1969.



regression is entailed. Equally, there is a parallel sense in which the dedifferentiating mode, which involves a release of conscious attention to differences, is one that deals in the inexpressible, in that which cannot be said but can be shown in the doing, in the possibility of a future meaning which is, at the moment of action, unself-consciously deferred. It is in this mode that one thinks in doing, that one becomes at one with the moment, fully immersed in the practical situation and the outward flow of libido constitutes a moment of extraversion or progression (Figure 5.1.4.)

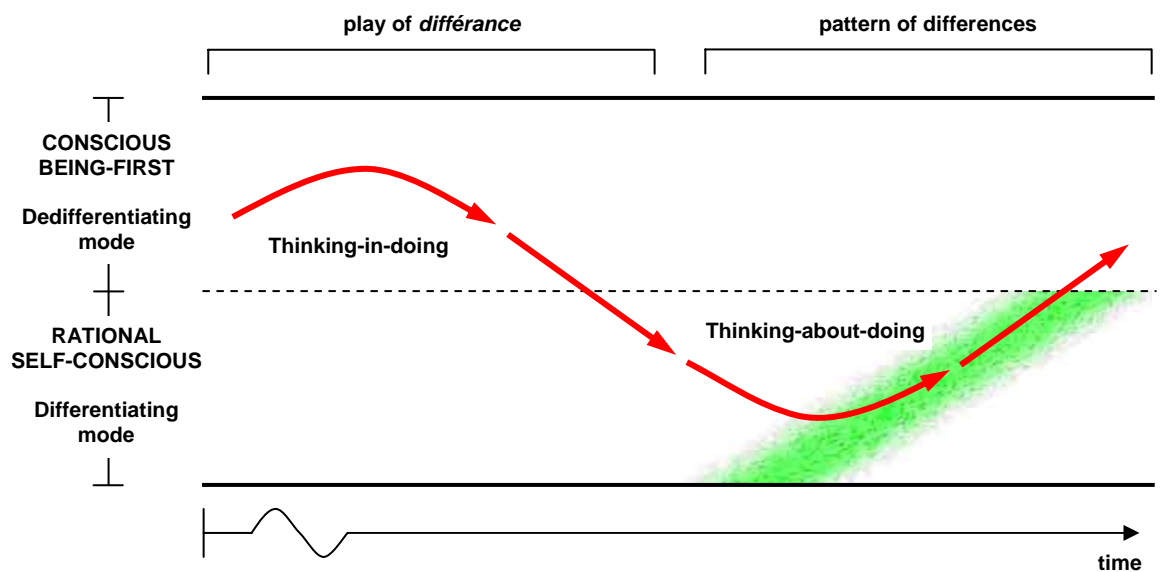


Figure 5.1.4

Track of the design process as a linguistic construction of alternating play of *différance*, in which meaning is deferred, and pattern of differences, in which a pseudo-synchronic state of meaning is realized.

The background-foreground metaphor can also be used to clarify the movement back and forth between difference and *différance* in the design process.

## 5.2 Model Transformations

### Organizational Perversion, Subversion, Inversion

Between actors in the organizational actor-network a radical potential is apparent in the moment of design. But this potential is not always realized outside of these moments, even as one that is latent. The speed and force of bureaucratic actions may be such as to cover over the counteracting tensions and contradictory positions that create the space for interpersonal spontaneity which is so essential for growth and change.

Organizations that realize a growing discrepancy between the bureaucratic drive for ‘efficiency’ and the distributed interest in ‘effectiveness’ may uncover this radical potential. If they do not, they become perverse, dominated by the pursuit of an economy of means which become ends in themselves. In the organizational context, the ossification of programmatic means (documentary actions) inevitably leads to a narrowing of prescribed concerns, an increase in the range of proscribed activity, a general frustration of human interests (Figure 5.2.1.)

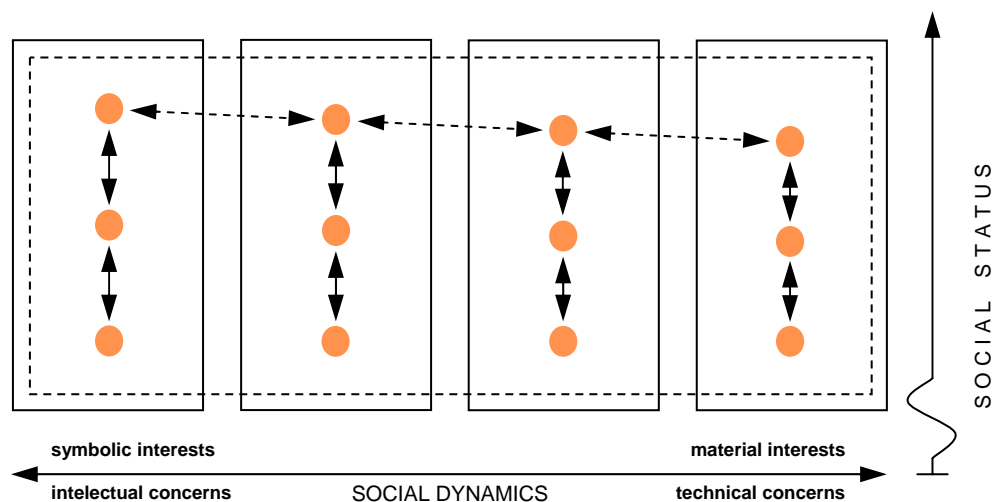


Figure 5.2.1

A performative social space in which defined zones representing narrow concerns are bureaucratically maintained, locations kept distinct and channels of communication prescribed.

Such organizational inertia may only be sustained by a conservative and essentially inhuman regime, one founded on the perpetuation of differences.

Where human interests are not being accommodated there will be an inevitable reaction directed towards the creation of alternative space. Such activity is subversive. Working below an organization's threshold of bureaucratic control, in its procedural and documentary interstices, an actor network will tend to redifferentiate the organizational space, to develop supplementary interfaces to support clandestine exchange, to engage the outlawed realm of uncertainty that is the play of *différance*. Such inventions may be the result of a limited process which quickly subsides to allow their normalization, their formal or informal incorporation into the bureaucratic framework (Figure 5.2.2.)

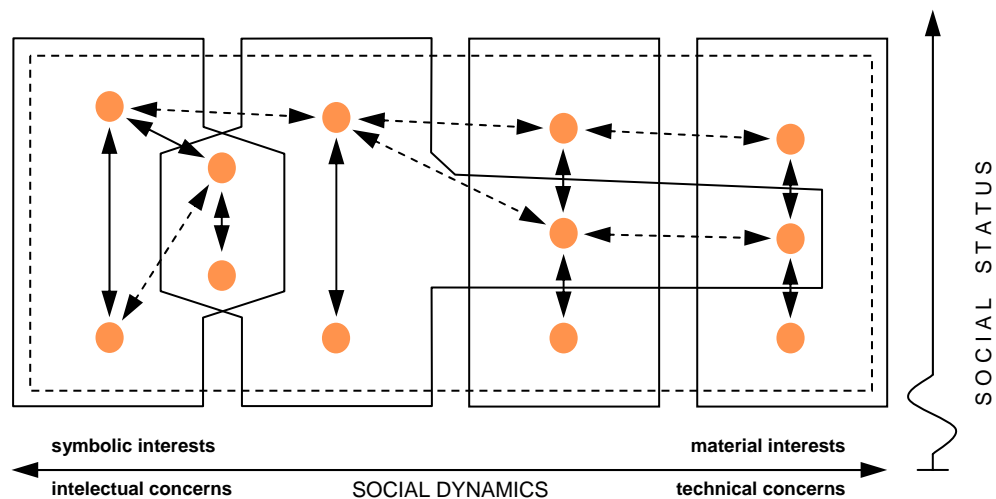


Figure 5.2.2

A performative social space in which the inventions of a limited process of organizational subversion are normalized by the realignment of predefined zones of concern. Ambiguous locations are given distinct identity and new channels of communication inscribed.

But taken to the extreme and allowed to multiply and to work upon themselves, they lead to an unstoppable subversion of bureaucratic norms and the realization of mutable organizational space (Figure 5.2.3.)

In this unstable condition the mechanisms of control and change suffer an inversion and the organization puts

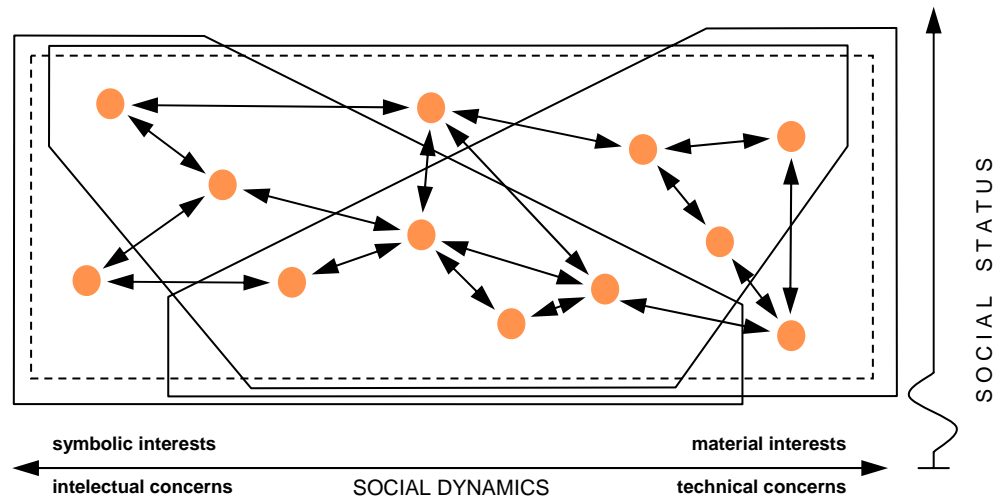


Figure 5.2.3

A performative social space in which overlapping zones are contingently defined by distributed concerns, locations are interrelated and channels of communication polyvalent.

itself at risk, it becomes chimeric, both dangerous and endangered. We should remember that few mutations are beneficial to the organism. On the other hand, successful organizational inversion may have peculiar consequences.

If we consider the mechanisms of control and change in non-inverted organizations to be the product of contingently defined administrative and creative collectives respectively, then the moment of design describes the point of inversion.

### Creative and Administrative Collectives

The collective concern for reinterpreting and restructuring the material of the organization, its heterogeneous actors, may be objectified in the construction of a creative collective. Equally, the collective concern for documenting and preserving that material may be objectified in the construction of an administrative collective. These constructions do not have any lasting, normative value - I would not wish to suggest an orthodoxy of creative and administrative collectives - but, as a heuristic device they facilitate a focus on those processes which define the museal quality of material

acquired and processed by an organization and the designed quality of that material as it is shaped and projected forward as a functional, meaningful complex.

The non-inverted organization pursues this balance of documentary and creative processes within a framework of normalized, perfectible operations which exactly equate to the museographical tradition. However, just as the recent historic transformation of museum organization, which is reflected in the moment of overturning the museographical tradition in favour of a museological indeterminacy, shows museums to be working towards an integration of functional collectives, organizational inversion represents, not a simple reversal of functions, a festival of fools, but something altogether more unsettling.

As the administrative collective adopts a design-led strategy and the creative collective assumes a process documentation-led strategy, a dynamic network of heterogeneous management-design actors is brought into play which is thereby imbued with peculiar mutational capabilities.

The process we see operating in institutions such as the National Maritime Museum in the 1990s involves certain preconditions. First, the individual actor's autonomy and identity has been formally 'valued' through what might be termed 'existential' and 'functional' inductions. And second, coordinated multiple activities, which characterize the hierarchical administered organization, and surface interactivity, which characterizes the flat networked organization, are both dissolved.

## **The Methodologies of Messiness**

### **The existential induction**

'Becoming known' is a museal process which involves documentation of the actor as formal acknowledgement of acqui-

sition by the organization.<sup>1</sup> Labelling, in the simple sense of attaching an identifying tag, is avoided by submitting the 'object' to a process of connoisseurship. Acting in a holistic 'curatorial' fashion, the organization must become acquainted with the individual through an extended or repeated act of direct interaction which aims to reveal the many 'qualities' of the individual - intellectual, biographical, physiological, emotional, etc. The object, rather than being subject to a prescribed and definitive act of labelling is thereby embraced by an open-ended process of interpretation and reconstruction

### **The functional induction**

'Proving roles' is an open organizational process which involves a series of, initially informal, engagements with a range of simulated and actual creative and administrative tasks. 'Pigeon-holing' is similarly avoided. The 'subject' engages in an initially unself-conscious but increasingly conversational and reflexive process of self-re-creation and self-redefinition. This induction is a broad-based form of initial training which achieves two main objectives: to familiarize the individual actor with the organization (and its disorganizational possibilities) and to evaluate the actor's immediate and future potential in terms of various explicitly and implicitly sanctioned modes of activity within the museum/organization - including that of creative counteraction.

### **Dissolved Structural Polarities**

1. 'Acquisition' here has a useful dual meaning: gaining physical possession of (particularly to advantage) and gaining a visual grasp on.

The creative and administrative collectives form two cores in the museal organization which may appear both hard-edged, clearly structured and definitive, and soft-edged,

amorphous, overlapping, and contingent.

The appearance of the collectives depends upon the viewpoint of the observer. From the outside they appear to be characterized by the former qualities, but they are visible only as abstractions - in documentation, on staff rosters, in accounts, on databases, etc., that is, as virtual structures. The deeper the observer penetrates into the organization the richer, more organic, and more interconnected the collectives become. The fully embedded actor no longer sees two distinct collectives at the heart of the organization but rather sees a single constellation of myriad actors - both human and non-human - held in dynamic equilibrium by an invisible force field of creative and administrative motives in which, to some degree, every actor shares. The museal organization, in the new museological sense, is characterized by its deep interactivity, the independent collaborative action of its actors in which ideological reflexivity is invoked as the guarantor of effectiveness, a process that defines a museal 'management-design'.

This 'management-design' is both design informed by management and management informed by design and it works towards a sustained, integrated approach to organizational growth and change.

This statement concerns 'design' in all of the four senses invoked in this paper:

- as a quality of the 'designed' *product* in which the normative physical reality of the designed object is revealed or recovered in an active social space of production and consumption,
- as the *programme* in context in which the normative documentary reality of the object of design is revealed or recovered in an active social space of design performance,

- as the *process* of radical change in material conditions in which the spatialities constructing the programme are reversed and the (psycho-)social reality emerges in the documentary spatiality of autographic productions, and
- as the *philosophy* of ‘ironic activism’ in which the normative ideological realities of design thinking are revealed or recovered in an active social space of pragmatic communicative action.

And it concerns ‘management’ in spatially complementary senses:

- as resource procurement and distribution which constructs a physical reality which may be mapped in architectural and geographical terms. But this physical reality is only revealed or recovered in the socially constructed processes that define the organization’s material dynamics. The movement and transformation of resources achieves social purposes by social means,
- as policy development which, in contrast, ostensibly constructs social purposes but only in the sense of an expressed, an actually or virtually documented, reality which is revealed or recovered through the performance of a creative cycle, an organizational design,
- as procedural administration which secures an accountable pattern of performances through the construction of documentary products, and
- as the philosophy of collective pragmatism which motivates and legitimates the mutual accommodation of heterogeneous actors’ reflexive performances, a continuous process of reinterpretation and reconstruction which establishes designerly action as a (post-)organizational paradigm.



What the equation of design, in its generic sense, with organizational change and growth does is invoke the deconstructive account of organization as a normative concept. Cooper has said that:

*... at the level of what we might call the infrastructure, we discover an intrinsic undecidability which can only be 'organized' or 'systematized' through an external force that is wholly foreign to it. It is this level which is resistant to order and organization and which we call 'disorganization'...*<sup>2</sup>

Designerly action foregrounds epistemological complexity as a necessary condition in which to proceed and, whatever else it does, deals with the embeddedness of heterogeneous actors and their immanent relations at an infrastructural level. It also posits the perpetual deferral of realized structure and meaning, the reality of a 'state' of becoming. In an important sense, therefore, organization does not exist except as the 'project' of disorganization and vice versa. Organization, as an encounter with epistemologically complex realities, is simultaneously disorganization.

The organization/disorganization coupling may seem to sound a note of despair, the impossibility of established differences, of certain meanings. However, the designerly approach offers a strategic solution to this apparent negativity. The context of praxis which 'management-design' envisions operates on a meta-theoretical level. In the organization of design,<sup>3</sup> a protocol is established, at this meta-theoretical level, for the transitions between physical, social, documentary and paradigmatic spatialities, a eclectic holism. The reflexivity of design reveals the simultaneity of an organization's projected futures and interpreted pasts and the absence of any logical connection between them. Therefore, it points to the moment of design as the crucial focus of attention, the site of ironic activism.

In characterizing management-design praxis as entailing

2. COOPER, Robert. 'Organization/Disorganization' *Social Science Information*. SAGE, 25, 2, 1986, pp.299-335.

3. See above: consideration of the constitutive spaces of 'product', 'programme', 'process' and 'philosophy' in design in 4.1 Organization of Design.

an eclectic holism and an ironic activism, our guilt in realizing the inadequacy of logocentric culture - its myth of rational explanation - is replaced by a joy in re-engaging with the sensual and visionary aspects of our being. These bring a rehumanized confidence into play in which one 'knows' how to cope, how to change things for the better, how to collaborate hopefully, without the burden of a search for, or recapitulation of, explanation, the *Logos*.

## 6.0 Summary and Conclusions

### Summary

The following summary highlights the key points in the model argument as it progresses from notions of spatiality through consideration of the locations organization, design, museum, and the intervals organization-design, design-museum, museum-organization.

### Spatiality

Amongst the metaphors commonly utilized to aid a visualization of organization, the spatial metaphor stands in contrast to others in proposing a concrete conception of abstract relations which is not bound to a particular representational image.<sup>1</sup> A spatial model realizes a graphic or three-dimensional physical frame for a system of signs and thereby facilitates a simultaneity and a holism which in the linguistic realm of the narrative, the mythic, may only be cognitively grasped. The model is both a perceptual and cognitive tool it constructs visible relations and effects by playing off dimensions of possibility against each other. It becomes a radical device, in epistemological terms, by redressing a cultural situation in which the written and the spoken have been privileged over the visualized and the experiential in the contest of knowledges.

It may be argued that beyond the realm of three-dimensional physical reality, modelling becomes solipsistic in the extreme. But, to do so one must make the assumption that there is an uncontested spatio-temporal formation of physical space. This is not the case. The principal consequence of the theories of relativity and quantum mechanics for modern physics has been the once-

1. MORGAN, Gareth. *Images of Organization*. Sage, 1986.

and-for-all dislocation of the possibility of perceptual and 'rational' correspondence. It seems that physical space is multidimensional and that this multidimensionality is a contingent construct. We may conclude, therefore, that all modelling, whether constructing a realm of physical spatial phenomena or something other than 'hard' material reality, even the most exotic of psycho-social realities, is subject to the same disintegration of Cartesian duality and the same contest of spatial formations.

In an important sense, therefore, spatial models, whatever 'reality' they purport to visualize, have a common ontological status and it is only in the epistemological sense that their significance separates or connects them. As design refers simultaneously to particular kinds of artefacts and objects, individual acts and social processes, documents and drawings, and embodied values and expressed beliefs, the spatial formations considered appropriate to modelling design are 'physical', 'social', 'documentary' and 'paradigmatic' respectively.

## Physical Space

The discussion of the relation between the designed object and the design drawing illuminates the paradoxical nature of physical spatiality. The design drawing itself is a physical object, a marked piece of paper. What significance it has is constructed in the process of perceptual projection.<sup>2</sup> In this process attention is paid to the documentary simulation and manipulation of perceptual qualities. We learn to see things as they are by requiring of our perceptual accomplishment the confirmation that objects occupy their judged location in space. In design drawing we apply this sensibility to the visualization of inventively imagined objects. We simulate our own perceptual processes in order to construct

2. VELMANS, Max. 'Physical, Psychological and Virtual Realities', conference preprints, *Embodied Knowledge and Virtual Space*, Goldsmiths College, London, 1995.

reality. This insight has a consequence for the ways in which we may visualize physical space. We may distinguish between realist, dualist and pluralist formulations using identical model elements and simply varying the relations between them.<sup>3</sup>

## Social Space

Crucial to conceptions of social space is a topological quality, a focus on perceived spatial relations which are independent of absolute notions of position and distance. The speed, force and rapidity of reciprocal communicative acts across the space of a system define the spatial relations between its 'actors'. The visualization of social space, therefore, requires the playing off of dimensions that re-present particular patterns and transformations in communicative activity.

In Parsonian terms, the possibilities of social space extend to three levels - culture system, social system and personality system. The ideas of Hofstede, Bourdieu, Lefebvre, Freud and Jung are chosen to relate a particular constellation of concepts to the breadth of this 'social cosmology'.<sup>4</sup> The irresolvable tensions between them do not invalidate the procedure, quite the reverse, they liberate a potential for a reflexive constructive mapping activity.

In working through the plurality of dimensions invoked in the five bodies of social theory the task is to choose ground upon which to construct 'useful', if contingent, subspaces.

Freudian and Jungian notions may be used to modify, in the direction of personality system, the dimensions suggested by Hofstede, Bourdieu and Lefebvre. Hofstede touches on emotional, political, behavioural, perceptual and cognitive aspects of a group's cultural place. Bourdieu connects the materiality of relations to the more ironic

3. See above, figures 2.1.9-11

4. HOFSTEDE, Geert. *Cultures and Organizations: Intercultural Cooperation and its Importance for Survival; Software of the Mind*. McGrawHill, 1991.

BOURDIEU, Pierre. [1979] *Distinction: A Social Critique of the Judgement of Taste*. Trans. Richard Nice. Routledge & Kegan Paul, 1984.

LEFEBVRE, Henri. [1974] *The Production of Space*. Trans. Donald Nicholson-Smith. Basil Blackwell, 1991.

BOCOCK, Robert. *Sigmund Freud*. Ellis Horwood, 1983.

JUNG, C. G. *Psychological Types*. Trans. H. Godwin Baynes. Kegan Paul, Trench, Trubner, 1926.

aspects of post-industrial social behaviour. Lefebvre loosens the attachment of any scheme to either the material or the non-material by invoking the continuous spectrum of possibilities for exchange, interaction, communication.

If one attempts a little violence to Hofstede's concepts by lifting them out of their original empirical quantitative context and placing them into an interpretive and essentially qualitative scheme, their epistemological status is apparently ruined. The possibility of reconstruction only exists in the sense that the consideration of small-scale social groups in the museum design organization context may identify significant areas of commonality in behaviour and belief. Dependence relations, forms of self and group identification, gender expression and tolerance of uncertainty are amenable to such re-formation particularly in the light of Freudian considerations. For example, gender expression becomes a realm of creative possibility powered by unconscious drives, and the tolerance of uncertainty becomes directly related to the capacity for alternate exercise of imagination and reason. Bourdieu's reference to levels of acquired economic and cultural capital can usefully qualify the local construction of dependence relations and the expression of collectivism particularly as a political gambit. The more concrete interpretation of Lefebvre's key ideas – 'exchange' as a measure of practical involvement, 'language' as a measure of difference in final vocabulary, 'signs' as a measure of documentary visibility, and 'equivalences' and 'reciprocities' as measures of functional complementarity – have clear connections with the above level of constructive possibility. Jung's ideas generate the potential for opening up an enormous depth in any model of social space. By extending several dimensions in which to track the progressive and regressive flows of libido, the realm of the unconscious is made as visible as that of the conscious and

many non-rational aspects of individual and interpersonal behaviour may be (re)presented or (re)constructed. In particular, the Jungian notion of the collective unconscious may be mapped into a subspace that accommodates conscious identification of the self and with the group to recover the possibilities of a non-rational psychic heritage.

To distil out of the range of dimensional possibilities enumerated in the text, the handful that would permit an adequate demonstration of museum design organization modelling required a recourse to the existential idea of 'Being' and in particular, Heidegger's adoption of the *Dasein* (the 'being-there'). Interests, attitudes, concerns and demeanour emerge as the key terms of an account of being-in-the-world. In the postmodern world the contest between the symbolic and the material aspects of our involvements entails not a choice between opposing terms but an accommodation of the tensions between them.

Demeanour implies a conversation of gesture, attitude an ideology of gesture; both notions skirt the central theme of involvement with which museum design organization (the design facet in particular) invites us to engage. Interests and concerns, on the other hand, focus specifically on intellectual and emotional engagement, on personal and social values, and on the organizational processes of constructing ourselves and others as objects.

Demeanour and attitude imply habit, routine and predisposition which construct a social dimension characterized by static qualities, a dimension of social status. Interests and concerns are opposed to this. Freedom of movement is the characteristic quality of the social dimension they construct, a dimension of social dynamics. Setting off these contingently defined dimensions of social status and social dynamics and adding a time line as a third dimension creates a generic social space open to all the

forms of elaboration and transformation suggested by the application of dimensions identified in the work of Hofstede, Bourdieu, Lefebvre, Freud and Jung.

### Documentary Space

The design drawing operates in the interstices between physical, social and psychological phenomena. The space of the design drawing is a peculiar example of the subjunctive space in which 'real things may be substituted for the absent'.<sup>5</sup> However, the 'real' thing to which the design drawing, the design construct, refers is an imagined future possibility, a deferred presence. The implied play of *différance* entailed in the production of the design construct is thus a process of semiosis. The terms 'substitution', 'simulation' and 'simulacrum' come into play.

In the design construct the substitution is for a mere possibility.

The design construct entails simulation not in the sense of direct identification with the physical object but rather with an object of linguistic and visual speculation which is at one remove from the physical. The design construct is characteristically perceptual and cognitive rather than material and sensual.

In the design construct, furthermore, substitution is immediately transcended. A parallel reality is invoked, a simulacrum. The simulacrum constructs its own semiotic space (a documentary spatiality), proclaims its own identity, and claims its own place in the material culture. However diverse it may be in physical form, the material of the design construct is its linguistic formation. This process entails a relation between any particular document and the object of design which betrays a cognitive style, on the one hand, and a perceptual compass, on the other. It rests in

5. BRYSON, Norman., Michael Ann HOLLY & Keith MOXEY (eds.) *Visual Theory*. Polity Press, 1991. p.246.



the elements of signification and evocation, a simulacrity which we believe to be substantial and seminal. Documentary 'form' is the touchstone in this respect, a taxonomy of documentary products reflecting different kinds of skilful communicative activity - generic terms might be: writing, drawing, modelling, recording, and performing. The process of linguistic formation also attaches a concreteness to the signifying/evoking material of the document in which what is present to the mind is treated as actually present. This attends to documentary content suggesting either a further taxonomy, categories of information in a design project - conceptual, programmatic, contextual, ideological, contractual, etc. - , or an abstract measure of the scope of the content acquired in any moment in the design process from the local, the smallest relevant detail, to the global, the holistic.

### **Paradigmatic Space**

The designer acting as a designer is not ordinarily engaged in theoretical discourse. The values and beliefs of the designer, where they emerge at all, normally do so in everyday speech and in working documents intended to be anything but 'philosophical'. But, such linguistic performance cannot help but be ideological, that is, culturally embedded. It is generally based on subjective and experiential knowledge and, therefore, surfaces in the products of the designing activity without the reasoned lineage we would regard as necessary to theoretical (philosophical) discourse. There is good reason for this state of affairs. Designers find themselves in situations characterized by epistemological complexity - an array of incompatible understandings, interests and qualities - in which there is too little information and time to employ purely rational means to decide

on and devise plans for desirable change.

Designers make ontological propositions when they design and they embody a 'world view' in the presentation of what they design. Ironically, the values and beliefs embedded in what is presented may contradict those implied in the narrative means of the presentation. This ironic potential arises out of the complex of spatialities entailed in design. For example, the physical form and the linguistic content of the design document are conventionally but not logically connected.

In each sphere of design - product, programme, process - there is the possibility of a separately active ideological space. A moment in the 'ontic' track of a designed object, a narrative turn in a design document, a particular social interaction in the design process, each embodies a contingent ideological position. The paradigmatic space is enfolded in the physical, documentary and social spaces in which design is (re)constructed.

These instances of independently deferred, distorted and distanced paradigmatic space are, in turn, independent of the active philosophical space in which the designer might choose to carve out a theoretical position. In abstracting general rules about knowledge from specific physical, social and psychological instances, theorizing enfolds these spatialities into a chosen location in paradigmatic space.

A range of paradigm models has been proposed since 1970 - Gouldner,<sup>6</sup> Atkinson,<sup>7</sup> Friedrichs,<sup>8</sup> Denisoff,<sup>9</sup> Effrat,<sup>10</sup> and Burrell and Morgan.<sup>11</sup> Approaching Hassard's analysis critically,<sup>12</sup> I conclude that Burrell and Morgan's map of two-dimensional sociological paradigms provides the best visualization on three scores. (1) The scheme is clear-cut, based on independent pairs of indices it maximizes the value of paradigm as 'location'. (2) Insofar as praxis, in the museum design organization context, is

6. GOULDNER, A. W. *The Coming Crisis of Western Sociology*. Heinemann, 1970.

7. ATKINSON, D. *Orthodox Consensus and Radical Alternative*. Heinemann, 1972.

8. FRIEDRICHS, R. *A Sociology of Sociology*. New York: Free Press, 1970.

9. DENISOFF, R. et al *Theories and Paradigms in Contemporary Sociology*. New York: Peacock, 1974.

10. EFFRAT, A. (ed.) *Perspectives in Political Sociology*. New York: BobbsMerrill, 1973.

11. BURRELL, Gibson. & Gareth MORGAN. *Sociological Paradigms and Organisational Analysis*. Heinemann Educational Books, 1979.

12. HASSARD, John. *Sociology and Organization Theory*. Cambridge University Press, 1993.

socially constructed such a paradigmatic scheme applies directly. (3) Since the demise of a functionalist museography, each of the particular practices involved in museum design organization is more or less open to the variety of meta-theoretical assumptions and constructs an identical space of paradigmatic possibilities.

The postmodern condition casts as a boon what was once regarded as a trivializing quirk, the kind of open interdisciplinarity that characterizes design and the new museology. Both practices occupy the borderlines of a variety of other disciplines, both are carving out distinctive ground of their own, both are becoming reflexive and particularly adept at dealing with incommensurable systems of ideas.

The Burrell and Morgan map is, therefore, one to be used as a way of locating where one is but also as a tool for navigating open territory. In these terms this study began with certain inclinations - nominalist, anti-positivist, voluntarist and ideographic - but then took off at such a speed as to collapse their locating power. If this is regarded as a process of dissolving the classical dualities then it is so only in an ironic sense, only as long as one keeps moving at speed, fixing on nothing, accommodating everything in an ironic activism. Recent philosophical debate amply reflects the experience of design and new museology as an ironic activism. As the defining terms of theoretical endeavour - nominalism/realism, antipositivism/positivism, voluntarism/determinism, ideographic/nomothetic - have become confused in a self-reflexive, self-contradictory discourse, a meta-theoretical level of thinking has emerged which is pragmatic, ironic and embodied in new post-Philosophical practices.

## Organization

Spatiality is the key metaphor in the project of modelling.

This connects directly with the visual possibilities implicit in the task of producing a useful tool for praxis, one which goes beyond the conventional narrative emphasis apparent in qualitative analysis.

The contingent definition of interfaces is the key to initiating the organizational process. The differentiation of the space of possibility leads to the play of *différance* and the cycle of dedifferentiation-redifferentiation that generates the moments of change.

A model simplifies in a way that parallels the attenuation of complexity apparent in the myth. As a primarily visual construct, however, the model is better able to preserve the quality of dynamism which is crucial in praxis. Openness to intervention is generally missing in narrative which rather is propelled towards closure. The pseudo-synchronic 'slice' becomes a necessary artifice of the constructive and reconstructive processes that characterize the practitioner's interventions.<sup>13</sup>

## Design

There is heuristic value in defining 'design' as a characteristic human trait and not as a quality of things. The conceptual constellation which is design has ontological and epistemological objects. The ontological object construes design as 'the things of order', the material culture, which emphasizes human agency in actively constructing and interpretively reconstructing a pattern or order to things. The epistemological object construes it as one of 'knowledge in practice', praxis.

However, one must differentiate between the generic human trait to which the term 'design' refers and the institutionalized professional practice of design. In this thesis, following Rorty's argument in relation to 'philosophy' and

13. See above: 3.1 Organization: Simplification and adequacy, and Figure 3.1.5.

‘Philosophy’, the latter is referred to as ‘Design’ with a capital ‘D’.<sup>14</sup>

The linearity of the design process is a myth which has outlived its usefulness. For one, design picks up where purely rational means leave off. That is, design comes into its own in dealing with epistemologically complex objects - ones in which contradictory/counteracting orders of knowledge necessitate non-rational, non-linear approaches that respond to the ‘moment’ and the material at hand. The methodology movement of the 1960s, 70s and 80s largely failed because of the temptation of epistemological reductionism. The point of this thesis is to propose that, in a focus on process that admits dynamic qualities in the design context, the pseudo-synchronic nature of any (re)construction potentially liberates the visualization of design from linearity and, therefore, that a more adequate model is possible.

## Museum

The museum provides a microcosm of organizational complexity and process which embrace material, social and epistemological objects and concerns. This is evidenced in the genealogy of museum forms in which each historic formation persist as one of many constitutive layers in the postmodern museum.

Using Walker’s production-consumption model of the field of design history, it can be shown that potentially the museum ‘mirrors’ its every facet. The museum can also be shown to behave as a ‘chameleon’ organization, and the curator, like the designer, as a ‘chameleon’ practitioner.

Peculiar paradoxes surround the situation of the museologically-oriented curator. It is ironic that the curator in the small museum is required to be a generalist and is largely unable to spend time working directly with

14. See above: 3.2 Design: ‘design’ and ‘Design’, and 2.4 Paradigmatic Space, note 31.

the collection, a task which may be undertaken, under the 'curator's' supervision, by ostensibly un(der)qualified volunteers. In the larger museum, the situation is also increasingly at odds with the traditional notion of curatorship. The specialist is likely to be largely a facilitator of other's (museum users rather than employees) work rather than a practitioner.

Curatorship, as an interdisciplinary professional practice, has either accumulated other practices or has fragmented into specialisms depending upon one's perspective on recent professional development. Whichever view one takes, the disintegration of museographical holism and its former certainties is undeniable. The new museological approach, which requires the practitioner to question the nature of the museum and to continually reconstruct its forms and practices, has given birth to the reflexive (situated, self-consciously critical) practitioner ultimately focussed on process-shaping, context-shaping, theory-shaping, that is, in the broadest sense, 'organizational design' activity.

### Organization of Design

15. FOUCAULT, Michel. [1963] *The Birth of the Clinic*. Trans. A M Sheridan. Tavistock, 1973. p.9. See above 4.1 Organization of Design: Foucault's Spatial Framework.

16. LEFEBVRE, Henri. [1974] *The Production of Space*. Trans. Donald Nicholson-Smith. Basil Blackwell, 1991. See above 4.1 Organization of Design: Spatiality in Discourse, which explains the necessity of accounting for shifts in spatiality entailed in rhetorical and logical turns.

The Foucauldian notion of the 'gaze' implies four orders of spatiality in design - the physical, social, documentary and paradigmatic - and draws attention to the transitions between them.<sup>15</sup> These transitions can be taken to describe the transformation of knowledge by stages from the concrete and tangible to the abstract and purely linguistic.<sup>16</sup> They also entail a shift in modes of perception and cognition from that immanent in acting, i.e. thinking-in-doing, to that which is analytical and abstract, i.e. thinking-about-doing.<sup>17</sup>

The central formation of design derives from the transitions between physical, social, documentary and paradigmatic spatialities. The four 'P's, product, programme,

process, and philosophy are referred to as:

- Product: (1) the designed object - the thing, place, message, system which is the end product of the design process; (2) the object as design, a material cultural object (re)constructed through discourse.
- Programme: the object of design - the design context, the problem-solution relation (design idea), and the performance of communicative actions circumscribed by a system of documentation.
- Process: (1) the activity of designing as experienced - a way of designing peculiar to a designer, a type of designer or group of designers; (2) a model providing an ideal visualization of or prescription for a way of designing.
- Philosophy: (1) the rationale for a particular design and/or way of designing; (2) a set of beliefs and values, or guiding principles about design and/or designing in general.

Figure 4.1.12 (p. 211) shows a spatial framework for design which encompasses all of the identified design phenomena, and clearly delineates the spatial transitions entailed in their (re)construction.

### Design of Museum Design

Design is implicated in every aspect of the multidisciplinary environment. It both shapes and is shaped by the organizational context. The actor-network concept is useful because it accounts for this reflexive condition and the combinations of human and non-human elements that comprise coherent actors in any organization. The programmatic activity in an organization and the ideological basis of its design act to continually redefine heterogeneous actors.

17. See above 2.4 Paradigmatic Space: The Absence of a Discourse and note 45.

This is necessarily an interpretive point. Analyses of

actor-network dynamics in the design/organization context have only documentary evidence to work on in respect of the tracing of ideological play. Therefore, they may only be reconstructed and the process is necessarily reflexive. The paradox of the situation must be accepted: there is no logical connection between the organizational future towards which the play of design ideology directs itself in practice and the organizational past to which any evaluation of ideological manoeuvres must refer.

To make ideological positions and dynamics clear in analysis, it is better to define generic roles, e.g. strategist, advocate, facilitator and maker, than to rely on contingent context-specific role definitions, i.e. in the museum the traditional museographically defined roles of curator, educator, project manager, conservator, designer, etc. This proposition compares favourably with Brunelli's findings.<sup>18</sup>

Using this method it is possible to visualize 'role drift' as a function of project type/scale and to problematize the ambiguity of the practitioner's status by relating the idea of generic role drift to the pseudo-synchrony of contingently defined stages or phases in the design process.

### Museality of Organizations

18. BRUNELLI, Maria. *The Role of Designers in the Management of Museums*, Ph.D. Thesis, Institute of Advanced Studies, Manchester Metropolitan University, 1993. See above: 4.2 The Design of Museum Design: Generic Roles and Ideological Stability.

19. *A museum is an institution that collects, documents, preserves, exhibits and interprets material evidence and associated information for the public benefit.* Museums Association, 1984.

The institutional definition of a museum inscribes its definitive operations in a legitimating code.<sup>19</sup> However, it is not only museums that adhere to such a code. There is a 'museal' quality to many organizations, a socially constructed field of information, meaning, difference that allows its 'actors' to function as communicative objects. Any organizational process of complex relocation - relocation in physical, social and documentary spatial terms - in which an 'object' (i.e. actor in the actor network) becomes the site of socially constructed meaning, is construed as a sign, and accumulates a special information content related only to the



extraordinary organizational process. Any such process may be connoted by the term 'museal'.

The museal organization acquires personnel which take on the qualities of the museal object. They are (re)constructed as material/informational objects, implicated in complex contingent constructs that combine particular human characteristics with other non-human ones to form heterogeneous actors.<sup>20</sup> These actors, like museum exhibits, which combine collection item, interpretive materials and particular processes of interaction with the museum visitor/user, may be rather temporary constructs, always open to radical reconstruction. However, the human component, as organizational object, like its museum equivalent, the collection item, must be carefully documented and preserved. The human is the characteristic material of the museal organization and has a value rooted in the nature of its relocation from the wider social sphere to a contingent position within the organization.

This view of the human as organizational object reflects the museographical priority of the processes of collecting, documenting, preserving and researching above those of exhibiting and interpreting. This constitutes a functionalist conventionalism in organization. However, the new museology has changed the procedural prescriptiveness implied in the traditional view. The new museology focusses attention on the necessity of contingent self-definition and continual re-creation. In the new museal organization the linguistic dimension is brought to the fore. It becomes radically renegotiable and makes the museum, the museal organization in general, the site of a continual semiosis with the potential to realize an infinite variety of unpredictable states. In this, intentionality serves as a comforting myth, a post-rationalization. Organizations that realize their museality in this new spirit become flexible, able to reconstrue themselves at will.

20. See above: 4.2 The Design of Museum Design: Ideology, Programme and *Différance*, note 8.

An organization is museal in as much as it entails a sampling of the world in which spatial relations are inscribed that substitute for what is absent and where this process is interminable, an 'economy of signs and space'. Such organizations are not singular and purposeful in any straightforward sense. They display a chameleon-like adaptability in which each actor is able to exercise a dynamic, creative reflexivity. They construct an ironic presence to themselves which they achieve through the communicative complex of organizational actors (collection) and forms of mediation (media). They become exhibitionary in character, a spectacle in which an order of knowledge and power is called into play by the organization of a universal panoptic ritual. But at the same time, this process continually changes the form, material and content of the organizational 'display'. Only through achieving repeated transmutation can the organization sustain its 'identity'. It may seem paradoxical, but, organizational identity can never be fixed and singular, rather it is always the result of keeping alive the possibility of meaning, structure and utility.

The museal organization only has clients insofar as they become participants, collaborators in the organization's projects. Just as the visitor's active participation is required to construct a particular narrative out of the myriad possibilities immanent in the (non-linear) exhibition 'text', the proper business of the museal organization effectively remains unconstituted until catalysed and completed by a supplement unique to each client. Although this organizational situation is never completely open-ended, it should produce a facility for expecting the unexpected and ensuring a high probability of success. The reflexive aspect of the museal organization makes it alive to its own processes as well as to the contingent nature of the interfaces it constructs with the outside world.

## 6.1 General Theory

### Contingency, Praxis and Sanity

The radical uncertainty of our condition as engaged beings is amply reflected in the discourses that (circum)navigate museum design organization. The practical situations that give rise to design activity can not be separated out from the design activity itself; the programmatic aspects of design are immediately reflexive and arbitrarily delineated. The design process engages not with some objective reality but with a complex of physical, documentary, psycho-social and paradigmatic interests and concerns which, at least in part, arise out of the contingent manoeuvres of the process itself: in this sense design is necessarily embedded and functionally unredeemable.

It may appear that 'design' becomes a trivial concept if one insists too much on its all-embracing scope and its thorough embeddedness in any practical situation. However, this would be to deny the undecidability of design itself. Where spontaneous direct action ends and planning for future action begins is not a question that can be answered without paradoxical implications.

The necessity of an account that subjectifies subject-other-than-subject relations is inherent in any modelling of a constellation such as museum • design • organization.

Firstly, the decentred human subject is embroiled in actor-network machinations to which unique authorship is impossible to assign and which are profoundly ambiguous in their purpose. Rational behaviour becomes a question of post-rationalization - when one is required to, one becomes wise after the fact and, in the process of wising-up, serendipity may be covered up as easily as the failure of established protocol.

Secondly, there can be no simple recourse to some notion of 'collective responsibility'. The collectivity, where it exists, changes its constituency as a function of the process in which it is constituted and, furthermore, it admits non-human and exotic hybrid entities as a matter of course. If one sees certain tools - cognitive and perceptual aids, cybernetic constructs - as extensions of ourselves, embodiments of knowledges, skills and values, one must also see them as transfusional. Very quickly they gain the power to blur the identities of our collectivities and to diffuse (de-fuse) the possibility of clear responsibility. Responsibility, as such, may become an abstract, post-rational, conventional assignment that has little to do with practical, political or ethical considerations.

The upshot is a reflexive formation of a radical sort, one which is multidimensional and in-formational. That is to say, the idea of praxis, which posits mutually informing theory and practical action, is transformed once one accepts the invisible transitions between present action and deferred action implicit in the idea of design. Design is a meta-praxis, a praxis engaged at a deeper level in the formation of praxes. By implication, therefore, the reflexivity of design is a peculiarly valuable one. Its apparently quixotic pretensions surface in the work of J. C. Jones (*Designing Designing*)<sup>1</sup> and C. T. Mitchell (*Redefining Designing*),<sup>2</sup> its mercurial quality I hope may be tracked/traced following the modelling project of this thesis.

1. JONES, J. Christopher. *Designing Designing*. Architecture Design and Technology Press, 1991 (previously published as *Essays in Design*. John Wiley & Sons, 1984.)

2. MITCHELL, C Thomas. *Redefining Designing: From Form to Experience*. New York: Van Nostrand Reinhold, 1993.

### **Constellation as the Generator of Meta-praxis**

'Museum design organization' implies an object of discourse, 'Museum•Design•Organization' a constellation of discourses. If the tension between these objectifications discloses anything it is the fact that the virtual spatialities

of the linguistic, the psycho-social, and the paradigmatic are the larger part of any reality we may feel or feel we know. The future, in a sense, has already arrived.

Rorty entreats us to accept as mentors the ethnographers and novelists who, 'specialize in thick description of the private and idiosyncratic'.<sup>3</sup> It seems to me that William Gibson has captured most vividly the exotic multidimensional actuality of the kind of 'construct' museum design organization represents.<sup>4</sup> In *Neuromancer* the expert 'console man' or 'cyberspace cowboy' is able to navigate freely through the virtual realities that represent, in a visible time-space simulation, the complexities of information structures in cyberspace and animate the more or less ephemeral entities constructed by their dynamic interplay. An entity, whether a corporation or an artificial intelligence, whose reality is largely or wholly non-physical, has an identity and a presence ultimately more powerful and more 'real' than a building or a body can ever be. Though unaided by any virtual reality, the exploration of spatialities and the modelling of museum design organization exemplifies the invasion of familiar, if illusory, Cartesian reality by multiple simulations of its phenomena.<sup>5</sup> This invasion, which has accelerated enormously since computers started talking to each other, makes the creation of a new class of 'tools' a priority. We urgently need conceptual and navigational aids upon which we can rely as we consciously venture into a mediated, dynamic, multidimensional, 'wired-up' world.

The museum's most powerful presence is no longer expressed in the physicality of its collections and their arrangement in particular orders in specific architectural spaces in specific geographical locations. It is expressed in multidimensional actor-network relations, in the cybernetic orders of its information structures which are distributed

3. RORTY, Richard. *Contingency, Irony, and Solidarity*. Cambridge University Press, 1989, p.94.

4. GIBSON, William. *Neuromancer*. Victor Gollanez, 1984.

5. MATTHEWS, Geoff. 'Invasion of the Body Snatchers: Architecture and Virtual Space', *Culture Theory Criticism Occasional Papers*, University of Humberside, 1994.

across physical, documentary, psycho-social and virtual spaces. The familiar codes of embodied knowledge with which we expect to decipher the museal assemblage of material culture have become inadequate. The museum continues to exist but it also begins to disappear. The defining boundaries of the museum which were once so concrete and certain - the collection, the archive, the curatorial body, the building - have partially dissolved.<sup>6</sup> The museum has expanded, become porous and mobile, and has submitted to varied forms of colonization, assimilation and simulation.<sup>7</sup> It has become impossible to retain a grasp on the idea of the museum without invoking one or another constellation of equally contested complex phenomena. The constellation forms a matrix capable of giving birth to new constructs and experiences: it recognizes the periphery as the site of action and meaning. This is the value of Museum•Designs•Organization: it sustains the dynamic intervals that surround a now uncertain core.

6. HOOPER-GREENHILL, Eilean. *Museums and the Shaping of Knowledge*. London: Routledge, 1992.

7. SILVERSTONE, Roger. 'The Medium is the Museum: on objects and logics in times and spaces', in MILES, Roger S & Lauro Zavala. (eds.) *Towards the Museum of the Future: New European Perspectives*. Routledge, 1994. pp.161-76.

*Both these media [videos and interactives], once incorporated into the museum, blur the boundaries between the museum's private space and the public world, a boundary which was pretty well held when both objects and visitors had to cross the same threshold. But they also blur the boundaries between the individual's private space and the public space of the museum ... (pp. 172-3)*

8. See above: 4.3 The Museality of Organization.

## Design, Organization and Control

The museal quality of organizations becomes apparent.<sup>8</sup> Put simply, I am proposing that all such organizations ought to be continually transformed, from the bottom up, by multidisciplinary and interdisciplinary creative practices. These creative practices are 'active' rather than 'reactive' and 'ironic' in the sense that they play off 'official' representations of organization and function against contingent ones operated by the practitioners themselves. They recognize and actively engage in processes of socially constructing organization, meaning and material products which have a praxiological rigour that may or may not be admitted by 'official' representations of what is going on in the organization and how it is structured. However far the

process of organizational representation goes in attempting to stabilize structure and function into a model of control, creative practices of this sort continuously undermine this will to control through a counter process of dynamic interactivity.

The organization's will to stabilize and control itself - to fix a global image of itself - ostensibly aimed at assuring efficiency and therefore survival, has the effect of rigidifying structure and suppressing responsiveness to environmental change. As environmental change appears to be inevitable, any fixed organizational arrangement can, at best, only achieve temporary success. Counteracting practices within the organization, a realm of communicative interactivity contingently concerned with localised effectiveness, have the effect of loosening structure and heightening responsiveness to environmental change.

9. STEPHENSON, Neal. *Snow Crash*. Bantam Books, 1992. The virus is a self-replicating, spontaneously mutating, micro-organism containing genetic material. It is able to penetrate the cells of a living organism and to alter the way they function. Once a virus has been introduced it never completely disappears. Once suppressed it may lay dormant for long periods until spontaneous mutation triggers replication and spread. The virus is disruptive. It causes illness and disease that affect a whole organism and may infect a whole population. However, whatever the short-term cost, the process is essential to survival. It promotes a responsive, robust immune system. The genetic response is to produce antibodies specific to each mutation of each virus. These accumulate in the host to constitute a contingent regime of organization and control.

The irony of the situation is plain; efforts to fix structure and control activity stimulate unwanted counteractions which, when successful, ensure the survival of the organization during periods of environmental upheaval. Equally, unfettered internal creativity is inefficient and destabilizing, and stimulates the imposition of unwanted structure and controls which, when successful, ensure the survival of the organization during periods of environmental stability. From either point of view, therefore, it is possible to assert that the enemy within is necessary to every living organization.

A useful metaphor here is that of the virus. In the novel *Snow Crash* Neal Stephenson explores the proposition that there is a far deeper connection between the digital and the biological worlds than we may realize.<sup>9</sup> So much so, that they may be susceptible to the same viral infections. He describes a long-lost Ur-language which reaches down to the primitive structures of the brain and affects their operation directly. It is the biological equivalent of binary

10. The metaphor of the Hox gene has been proposed by Paul Hekkert to differentiate between design which is radical and innovative, which establishes new archetypes, and design which is extrapolatory, which plays out the potential of an existing archetype. I find this unsatisfactory for two reasons: (1) most design is neither one nor the other but somewhere between the two, and (2) too much emphasis is given to an objective notion of design, and particularly to designed objects and intentional acts, and too little to programmatic, procedural and philosophical aspects of design. The virus seems more immediately ambivalent and polyvalent.

HEKKERT, Paul. 'The Designer as a "Hox Gene": The Origin and Impact of Vision in the Evolution of Design', in *Doctorates in Design and Architecture*, EAAE Conference Book, Delft University of Technology, 1996. pp.81-2.

code in the programming of computers. A single informational virus coded variously in the monosyllabic Ur-language and in raw binary form can cause the same effect in the human brain and in the computer - an irretrievable breakdown known as 'snow crash'. In effect the virus strips out all of the higher levels of programming and returns the brain/computer to a primitive state, an unstructured state in which it is susceptible to radical reprogramming.

Design is such an informational virus. It is able to infect several different spatialities simultaneously. Its effect is to open up a situation to radical reprogramming. It affects whole organizations and populations, and it mutates.<sup>10</sup>



## 6.2 Museum Design

### Discipline Specific Conclusions

An idea of modelling can be expressed in one sentence.

*Modelling is a process of discerning, examining and proposing a constellation of elements which illustrates a possibility.*<sup>1</sup>

Specifically this project set out to illustrate the possibility of a museum design that is 'effective' in a profound praxiological sense, one which is: (1) radically creative in its approach to, and treats as interdependent and interpenetrating, the problems of organization, communication and action, and (2) humanistic, and develops its humanistic qualities through an ironic activism which is quite opposed in theory and in practice to the institutionalized conservatism engendered both by traditional museography and by material object oriented design.

The conclusions for general theory point up the necessity of a reflexive condition that affects each actor in the museum design organization actor network and amounts to a limited mandate for anarchic, that is, anti-organizational, communicative activity. The ironic quality of this localized drive for effectiveness is that, in disrupting organizational efforts to impose a global image and a rational order whose aim is general efficiency, longer term survival is made more, not less, likely. The 'design' virus, it is argued, reinforces the organization's immune system, that is, makes it a dynamic, change-dependent, innovative and responsive organization.

### Hierarchy as a Communicative Artifice

1. POTTER, Norman. *Models and Constructs: Margin Notes to a Design Culture*. Hyphen Press, 1990, p.10.

The above proposition raises a socio-ecological argument against the idea of hierarchy. Far from being a natural

phenomenon it could be argued from this point of view that it is only a metaphor, a way of visualising a transient quality that appears from time to time in dynamic organizations, part of an essentially mechanistic organizational myth which, perhaps, has outlived its usefulness.

Traditional museography tends to focus on the history and mechanics of collecting and preserving material culture, a focus which has made good use of static hierarchical models of organization. For example, the Victorian ideal of a universal, closed system of classification persists in certain areas of the museum process. Terminology control in collection documentation continues to exercise curatorial teams in national and other large museums, and systems specialists in organizations such as the Museum Documentation Association, not because workable or adequate collection documentation activities have not been established, but because the universalization and closure of these activities remains a goal.<sup>2</sup>

This is not to say that hierarchical models still dominate the field, in many areas of the museum process they have been superseded by non-hierarchical ones. For example, until recently educational and interpretive activities, including exhibition, were based on an essentially linear communication model which placed the curator at the top, the mediator (educator, exhibit) in the middle, and the visitor at the bottom. The belief underpinning this model was that the curator gathers information and creates messages some, ideally all, of which filter down through the museum communication system to the receptive visitor. (Figure 6.2.1) This model, which implied all power to be in the hands of the curator, poor communication to be the mediator's fault, and regarded the visitor as an inessential and totally passive beneficiary of the system, has been rightly discredited. More recent models lay emphasis on the participative

2. Museums Documentation Association (MDA) see above:  
3.3 Museum, note 12.



Figure 6.2.1

The traditional three-unit model of communication.<sup>3</sup>

role each actor in the system plays in shaping and interpreting messages and the interactive nature of the communication process. (Fig. 6.2.2)

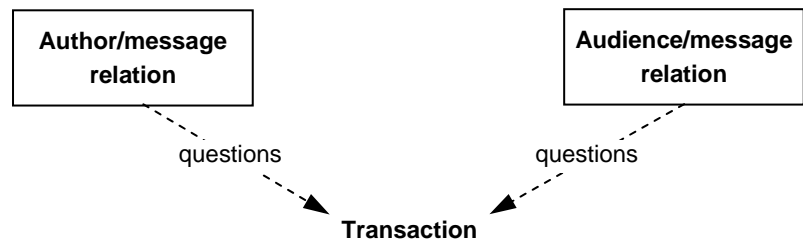


Figure 6.2.2

Communication process (Paulette McManus, after Sless, 1981).<sup>4</sup>

3. Quoted without source by McMANUS, Paulette, 'Making Sense of Exhibits' in KAVANAGH, Gaynor. (ed.) *Museum Languages*. Leicester University Press, 1991. pp.35-46. An alternative generic linear communications model is provided by HOOPER-GREENHILL, E. 'A new communication model for museums' in the same volume, pp.49-61.

**transmitter→medium→receiver**

(from CAMERON, D. 'A viewpoint: the museum as a communication system and implications for museum education', *Curator*, no. 11 (1968) 33-40.)

4. Op cit. (SLESS, D. *Learning and Visual Communication*, London: Croom Helm, and New York: John Wiley, 1981.)

5. O'NEILL, Mark. 'After the artefact: Internal and external relations in museums.' in *The Museums Profession*. Gaynor Kavanagh (ed.) Leicester University Press, 1991. pp. 27-36 (p.28.)

One may speculate that the field of museum communication has been affected by the new museology and that the field of museum documentation, particularly the hard-systems end of it, has not. It is unlikely to be as clear cut as this, but the idea is worth pursuing.

Traditional museography tends to defer indefinitely the political and socio-cultural dimensions of its object. To get anywhere with the complex detail of technical and academic activities its discourse tends to be one of pragmatism and scientific discipline. The institutional context is therefore accepted as the status quo and this is not open to question unless some crisis becomes evident. Mark O'Neill captures this introspective turn in the following way:

*...museums are examples of that extension of human capacity through organization called bureaucracies ...usually started by people for a very specific purpose. Often such organizations then establish a life and purposes of their own ...based on the traditions which develop within the organization and give priority to the needs of staff and their interaction with each other...*<sup>5</sup>

As long as the investigation and prescription of practice appears to be progressing towards better technical and professional standards everything is hunky-dory.

However, a crisis of momentous proportions is affecting museums. First and foremost this crisis is one of knowledge,<sup>6</sup> if one thinks of philosophy as a river, a channel which supplies consistent fresh outlooks and takes problematic and messy ones away. Then it is a river which has burst its banks. The systematizing of knowledge, undertaken in the name of the Enlightenment, appears to be a project which has failed. It seems that knowledge is historically and geographically contingent, at least it is not possible to make much of it otherwise for very long.<sup>7</sup> Even the objectivity of science, which was supposed to be guaranteed through the careful design of its methods, has become subject to relativistic doubt.<sup>8</sup> Mainstream philosophy has, in a sense, lost much of its job and, increasingly, every practice that would once have deferred the problematic aspects of its formulation and authority to philosophy is instead facing them head on.

6. LYOTARD, Jean-François. [1979] *The Postmodern Condition: A Report on Knowledge*. Trans. Geoff Bennington & Brian Massumi. Manchester University Press, 1984.

7. CAPRA, Fritjof. *The Turning Point: Science, Society and the Rising Culture*. USA: Simon & Schuster, 1982.

GEERTZ, Clifford. *Local Knowledge*. New York: Basic Books, 1983.

RORTY, Richard. *Philosophy and the Mirror of Nature*. Basil Blackwell, 1980.

8. FEYERABEND, Paul. [1975] *Against Method*. Revised ed. London: Verso, 1988.)

Museums are concerned with knowledge of particular sorts - those which can be derived from a consideration of material culture. However, to proceed, the museum engages in a process which takes material out of its natural context in the real world. To a great extent this breaks a dynamic network of relations to people, places, events and things, in the past, and an immanent present and future. Instantaneously, the process radically alters the nature of the material it is designed to preserve and study. What is preserved and made available for study is often only some limited physical aspect of the original material in which only problematic traces of its cultural past and potential can be discerned. What begins to happen is that a new context, a new network of relations, is established, one

which is, to all intents and purposes, limited by the perceived boundaries of the museum system.<sup>9</sup> One can see the ironic quality inherent in the traditional idea of a museum - the museum process counteracts the conditions which might be preferred for creating knowledge of material culture, and yet, as we know, a museum can work no other way without losing its current defining qualities.

There is a parallel here with a fundamental problem in particle physics. The process of observing atomic particles affects the behaviour and the nature of what is observed, the only way to understand what is going on, therefore, is to regard the observer as part of the system. We begin to come to a similar conclusion in relation to the museum object. The process of studying material culture affects the possibilities for interpretation, if one is to understand what is going on one must account for one's own participation in the formation of cultural objects. This conclusion brings to the fore, as contingent practical considerations rather than as separable philosophical problems, the issues of (1) 'museality':

*In the acquisition of material, of what ever kind, let alone in ...making it publicly accessible, museums make certain choices determined by judgements as to value, significance or monetary worth, judgements which may derive in part from the system of values peculiar to the institution itself, but which in a more profound sense are also rooted in our education, our upbringing, our prejudices.*<sup>10</sup>

(2) 'aesthetics';

*Whether we like it or not, every acquisition (and indeed disposal), every juxtaposition or arrangement of an object or work of art, together with other objects or works of art, within the context of a temporary exhibition or museum display means placing a certain construction upon history, be it the history of the distant or more recent past, of our own culture or someone else's, of mankind in general or a particular aspect of human endeavour.*<sup>11</sup>

9. PEARCE, Susan M. *Museums, Objects and Collections: A Cultural Study*. Leicester University Press, 1992.

10. VERGO, Peter. (ed.) *The New Museology*. Reaktion Books, 1989, p.2.

and (3) 'interpretation';

*Beyond the captions, the information panels, [all of the media forms used in an exhibition,] the accompanying catalogue, the press handout, there is a subtext comprising innumerable diverse, often contradictory strands, woven from the wishes and ambitions, the intellectual or political or social or educational aspirations and preconceptions of the museum director, the curator, the scholar, the designer, the sponsor - to say nothing of the society, the political or social or educational system which nurtured all these people and in so doing left its stamp upon them. Such considerations, rather than, say, the administration of museums, their methods and techniques of conservation, their financial well-being, their success or neglect in the eyes of the public, are the subject matter of the new museology.*<sup>12</sup>

This view of the museum practitioner's working situation as inescapably theory-laden is relatively new. Because, as we can see, it has arisen out of a crisis in the condition of knowledge, those most closely involved in its creation and communication in the museum context have been most affected and affected first. On the other hand, those involved in the technical, and often less visible, aspects of the more public activities have been least affected or affected only latterly. Amongst these we can include, not only those allowed to specialise in system design and implementation for collection documentation, but also those involved in devising and executing conservation and security operations.

Exhibition and museum designers occupy a middle position; no longer so commonly isolated from the interpretive dimension of public communications, often they must act as a broker not only between the curator as client representative and the contractor but increasingly between other members of the museum's exhibition team, which may now include curator, educator, audience advocate, and conservator as well as the designer and whose agendas and experiences may differ but whose practice - input to a project - may overlap considerably.

11. *ibid* pp.2-3.

12. *ibid* p.3.

A peculiar spectrum of concerns and interests is assembled in the museum which is poorly served by a purely instrumental, regulatory approach to organization. As the museum organization may be seen as an exemplary 'museal' organization, the processes of exhibition and interpretation are characteristic not just of the public interface but of the whole organizational infrastructure.

The museum may be 'bureaucratic' but it is so in the special sense of accommodating the inescapably subversive dimension of the design-centred museum process. Because this embodies an engagement with the complexity of the museum environment, because the museality of human actors in the museum organization is brought into play in the exhibitionary construction of a contingent actor network, it constitutes a reflexive praxis that responds directly to the postmodern crisis in knowledge.

### Profession v Professionalism

It is clear, then, that there is a strand in recent museology that questions the status quo in a rather fundamental way. In describing where museums have come from, it refers to unreconstructed practitioners as exemplifying the worst characteristics of bureaucracies:

*The taxonomy of art history and the excavation record feel, well, authentically authentic. Being on the inside of an institution with this way of thinking - what one might call museum culture - feels normal and secure.*

*... Collecting and cataloguing artefacts, as if it were an end in itself, is the kind of Kafkaesque function at which bureaucracies excel.<sup>13</sup>*

At the same time, in describing their potentially liberatory move into reflexive practice, it warns against a blind headlong drive to form a profession. Neil Cossons, a former

president of the Museums Association, has described himself as somebody 'with a deep suspicion of professions but an overwhelming admiration for professionalism'.<sup>14</sup> And, although strongly in favour of a single heritage care profession, Tomislav Sola, an internationally renowned museologist, has spoken of the radical upheaval in theory that must follow from recent innovations in practice if such a profession is to be formed. Even so, he recognized that it will contain a 'dramatic dichotomy' and therefore a 'latent disunity' in accommodating such fundamentally different museum functions as conservation and communication.<sup>15</sup>

It seems that a diverse range of museum professionals and museologists alike are increasingly dissatisfied with the bureaucratized, inward-looking actuality of many museums that appear to be suffering a 'tyranny of the object,' a domination by the practical and financial difficulties of caring for collections. These museums seem uncertain of their direction in the face of a transformation in relations between museums and society which has taken the form of a shift from: '... institution to action, from product to process, from object to information, concept and idea, from education to communication ...' <sup>16</sup> They are seeking a new cornerstone upon which to build a self-aware and self-respecting profession that knows where it is going and why. The process seems to hinge on a number of issues: counter-acting the bureaucratization of the museum, liberating the curator from a mechanized future, unifying the increasing diversity of museum professionals, and reconnecting the museum to the wider social arena.

In modelling museum design organization the most promising avenue of development is opened up. Continual reconstitution of the museal actor-network necessarily implies a reflexive organization, but of a peculiarly valuable type, a creative organization, a designerly organization, one

13. O'NEILL, 1991, g.29.

14. See Neil Cossons, Presidential Address, *Museums Journal*, Dec. 1982.

15. SOLA, Tomislav. 'Museum professionals: the endangered species.' in BOYLAN, Patrick (ed.) *Museums 2000: Politics, People, Professionals and Profit*. Museums Association/Routledge, 1992. pp.101-13 (pp. 108-12.)

16. *ibid.* p.108.



that deals holistically with communicative complexity, with the word-image-artefact-act complex and its context. And the participative human actor at the core of this contingent network of heterogeneous actors is, therefore, by definition, against certain defining features of a profession. He/she is against its exclusivity, its prescription of systematized disinterested behaviour, its institutionalizing process, and its monolithic model of knowledge and power. Neil Cossons' instincts, in these respects are laudable. What the focus on professionalism is meant to emphasize is the individual's attitude and demeanour as opposed to a set of concerns and interests which are collectively defined, preserved and defended. What Cossons admires about professionalism is the ethical and aesthetic stance that it entails, the duty of care, the sense of social responsibility, the accumulation and sharing of knowledge, the belief in high standards of personal conduct and value judgement, and the concern for quality of life.

To summarize, the organization of material, interpretations and human actors is a dynamic interactive process open to radical shifts and conflicts of underlying principles. Over time this has the effect of creating a constellation of practical fields which is effective and reflects the apparently necessary coexistence of incommensurable paradigms.

The principles held to be foundational to each of the main areas of activity may normally be expected to be, if not contradictory, then at least conflicting or counteracting. We often couch our discourse in words that avoid contradiction but this cannot hide, neither can it stand in place of, activity that plays out conflict or is a game of counteractions. The handling of these conflicts or counteracting tendencies between, for example, interpretive flexibility in curatorial research, technical determinism in conservation

science, and visionary indeterminacy in exhibition design, is what lends a particular quality of dynamic complexity to the organization of the museum. Simultaneously, it makes individual 'professionalism' productive and collective profession making counterproductive.

One can say that the domination of traditional museum organization by a museography, a hermetic culture of curatorship, was a denial of potential and an unnecessary limitation on effectiveness. This is a humanistic as well as praxiological point.

What ought to happen in museums is that all of the power plays potentially arising from the full range of disciplines involved in museum activity be liberated to take their place in a constantly evolving dynamic organization. Perhaps one cannot compromise between the incommensurable but one can and ought to allow them to show as objectified propositions in open conflict/counteraction/conversation, to show as a constellation of temporary constructs, open to change, open to interventionism on the part of all of the human actors involved in the museum process.

This proposes that the boundary of the museum organization is not a certain one and that the museum professional is bound to engage the visitor and the other, the user and the non-user, in some sense, at some time, as a matter of necessity in respect of the continuation of the museum. As a network of heterogeneous actors, a museum organization is involved in shaping, just as much as it is shaped by, its actual and potential audiences and its political and economic context.

The overtones of this are (1) ecological, a particular belief in the self-organizing powers of complex communities and (2) anarchic, museum activity is political activism of a profoundly subversive and polyvalent kind.

## The Reconstruction of Museum Design

In 'designed object' terms, the conventional focus of museum design is the exhibition or the museum building, but, if one is to consider what one means by the idea of 'museum design', this provides an inadequate starting point. Museum design is dependent upon the programmatic implications of the museum which have the potential to construct a much wider range of designed objects than these conventional products.

A museum is not a building. It is not an exhibition. It is a complex organization understood via a range of more or less contentious and ambiguous sociocultural and socio-technical interpretations. Even the apparently neutral 'official' definition of a museum can be read as deeply imbued with positivistic, realist notions.

*A museum is an institution which collects, documents, preserves, exhibits and interprets material evidence and associated information for the public benefit.*<sup>17</sup>

The ideology of a separately existing material reality subject to processes of objectification, control and discipline, cultural domination and surveillance is embedded in the very language of definitions promulgated by museum professionals, the institutions and the machinery of legal and political control.

- to collect: acquire, possess and take control of ...
- to document: claim and enforce the privileges of ownership, define in terms of institutional imperatives and processes, alienate, objectify, remake identity and meaning in terms controlled by an academic elite...
- to preserve: to take out of natural time, the cyclical or spiral time associated with living social and ecological processes, and place in artificial linear time where age

17. Museums Association, 1984.

has nothing to do with the imprint of life and use, and everything to do with very, very slow chemical reactions ...

- to exhibit: to present for public inspection objects reduced to the condition of visible sign or action at the service of the institution and particularly the purpose of displaying the power of the institution over knowledges, identities and narratives: '...the provision of object lessons in power - the power to command and arrange things and bodies for public display...' <sup>18</sup>
- to interpret: to confirm the institution's power over knowledges, identities and narratives through the reinforcing of historical and scientific codes, the surveillance of communicative environments, and the limiting of visitor experience:

*Public museums instituted an order of things that was meant to last. In doing so, they provided the modern state with a deep and continuous ideological backdrop...*<sup>19</sup>

*... the exhibition transformed the many-headed mob into an ordered crowd, a part of the spectacle and a sight of pleasure in itself*<sup>20</sup>

Having deconstructed the museum definition in this way to reveal its ideological pedigree, we can begin to subvert each fragment in the attempt to liberate other possibilities. However, this subversion is not just a question of words; it means doing things and making things in deliberately counteractive ways.

The friction between factions in the day-to-day contingent engagement with the museum process has very little to do with the assumed over-arching power of this 'official' reality. It represents a living process of socially constructing the museum; it reflects sometimes, but just as often blurs, the artificially fixed image of a museum presented in unforgettable forms of words. If we were to favour a structuralist orthodoxy we might be deconstructing the following:

18. BENNETT, 1988, p.76.

19. *ibid*, p.93.

20. *ibid*, p.85.

A museum is a cultural organization created by the transportation of social objects and their material possibilities through time.

if a radical humanist one, the following:

A museum is the slaughterhouse of certainty, the ultimate junk yard and the birthplace of mythologies and identities.

This process is the essential 'museum design process.' Its tools and techniques are not just those of the exhibition designer or the museum architect, but, it is from an experimental, exploratory attitude inherent in all creative design practice that the broader range of museum actors must take their cue.

To quote Neal Potter, somewhat out of context: 'Technology is just technology - if you want to change people's perception ... the human touch is needed.'<sup>21</sup> This idealizes the 'designer'. Neal Potter's example is an encouraging one, but many other designers and architects are unable to exercise to the full their creative abilities, express the liberatory potential of their discipline, win the confidence of their sponsors and clients, and create the space for radical intervention and innovation, which is a quality only of a design that is deeply interactive with its social and physical context.

We need to take this idea of the ideal designer apart also.

Architects profess a deeply social dimension to their discipline, but in their work, they often fail to move beyond a conception of society as a timeless generality. What matters at every level of design - the social context of end-user and the social context of designer-client-contractor team - is the unavoidable impact of human interactivity. Architects/designers design buildings and spaces to house and facilitate it, and they work in ways which depend upon it. 'Designed object', 'design programme' and 'design process' are all

21. POTTER, Neal. 'Power to the People' *Design Week*, 5.3.1993, p.8.

fundamentally concerned with the problem of human interactivity. In many more cases 'design philosophy' should also centre on this problematic; not so much the socio-political, which is where much architectural philosophy begins and ends, but more the psycho-ecological. We have to begin to realize simultaneous qualities of scale and complexity in every design situation - the between-people, the person-and-environment, and the whole-environment qualities.

The notion of a 'creative organization' connects with the idea of socially constructed realities. The museum self-consciously creates a narrative-based reality in its collections and in the interface between those collections and the public. It constructs spaces - literally in exhibitions, metaphorically in its educational and research activities - in which interpretations of the world, or parts of it, are made explicit. In one sense the material and the narrative are not 'in' the world, they are 'of' it; in another sense, however, the material and the narrative are brought into the world by the exhibition and publishing processes.

What it is and what it is about cannot be separated. The exhibition in particular has this ambiguous status evidenced by the difficulty popular critics and journalists have in talking and writing about exhibitions. Normally they focus their attention on the individual material objects that are 'displayed'; the selection of, and qualities possessed by, these collection items receive a great deal of attention. In contrast, the exhibition structure and form as a whole, as a piece of communication, tends to receive little attention. In this respect writers about exhibition have something important to learn from the organizational literature which includes its biographies and ethnographies, but also its structural, cultural and economic analyses, just as it includes its practice manuals as well as its underpinning theories.

To place a designerly accent on its scope, it is critical as well as descriptive, ranges across the spectrum from local detail to global context, and more commonly extends its focus beyond product and process to embrace programme and philosophy/ideology.

The possibility and, ultimately, the priority of a realm of discourse that engages the socially constructive aspects of the exhibition is ready for disclosure in the literature of exhibition criticism. Dis-closure is the key: the deliberate attention-giving process of deferring the kind of conceptual 'closure' entailed in materialist, functionalist discourse characteristic of the focus on material content and rational process in traditional exhibition criticism. Once the object of discourse is opened up to embrace the actor-network, in which the human, the material and the linguistic - the moral, the physical/mechanistic/descriptive, the symbolic/virtual/interpretive - are regarded as equal in analysis, the certainties underpinning the objective viewpoint disappear and the illusion of achievable closure, final knowledge, is shattered. No mean thing ...the most positive achievement we may aspire to, after all, is to have kept the conversation going, to have identified, explored and negotiated a fresh interpretation, a more adequate understanding. If 'science' means anything it means knowledge at the leading edge of a continuing process. One must strive, as the surfer strives, to ride before the biggest wave.

## 6.3 New Directions<sup>1</sup>

### Design Research: A New Context

The movement in design research, signalled by the recent expansion of postgraduate activity in the new universities (former polytechnics) in the UK, is toward designers' interests and concerns. For too long the field of design research has been dominated by the interests of those outside the design discipline. Justifiably, design has been called merely an activity, not a true profession.<sup>2</sup> The main complaint being that design has no established body of knowledge and no research culture with which it may be enriched, renewed and sustained. This situation, however, is changing. The activity of designerly enquiry is a novel interdisciplinary research methodology which is being developed by those who have the most to gain, the academics and practitioners who work together in the graduate design departments of the new (and some of the older) universities. As one might expect, the research agenda is a reflexive one - given the designer's postmodern condition the design of designing is an inescapable issue - but, whereas those outside of the design discipline have taken design phenomena as their object of enquiry, designers take theirs to be the complex of possibilities presented by the world. Therefore, in the future, designers will tend to lead design research programmes which have at their core a process of designerly enquiry and it is they who will determine the scope of design research and which other disciplinary approaches are brought to bear on its objects of enquiry. Sociologists and others may continue to find design a peculiar and fascinating object of enquiry but in the future such researches may not claim to comprise the substance of design research merely its necessary supplement.

1. An earlier version of this section was presented as a paper entitled 'Why we need a research culture in design', at the EAAE conference 'Doctorates in Design and Architecture' Delft University of Technology, 7-10 February, 1996.

2. HILLS, Sir Graham. 'A Renaissance in Design Education', in MYERSON, Jeremy. (Ed.) Design Renaissance Selected papers from the International Design Congress, Glasgow, 1993. Open Eye/CSD, 1994.



## Changing Design Research

There is a need to reclaim design research for designers. Too much design research has been conducted by technologists, systems practitioners, historians, psychologists, sociologists, anthropologists, organization and management theorists. Too much design research has been research *into* design. Too little design research has been research conducted by designers doing what they do best - designing.<sup>3</sup>

Design is distinctive; it is concerned with how things could or ought to be. It has, therefore, the greatest potential for a worthwhile influence on political, economic and cultural realities. Unlike craft, design addresses **radical** material change: unlike art it must address the interests of **others**. Bound into the very notion of design is the necessity of an engagement with the complexity of the human situation in the world. Design is not only a great orchestrator of knowledges, it constructs its own peculiarly polyvalent knowledge which makes visible and realizable the possibility of change.

In design we have a peculiar problem: generally design does not communicate anything important through its end products. The things, places, messages<sup>4</sup> and systems which are the outcomes of implementing designs normally are not readily interpretable as generalized knowledge. Generally speaking, designed objects are poor vehicles for the communication of useful information about the world, even to most designers never mind to politicians, executives, technologists, and academics. The knowledge that is embodied in a designed object forms only the tip of a potential iceberg of insight. To recover what is beneath the inscrutable surface of the designed object one must allow the design process itself to speak and in the same operation one must facilitate the recovery of the programmatic and philosophical

3. The contents of Design Studies, until recently the only refereed design research journal, is almost exclusively research into design. Practicing designers rarely contribute unless as design academics.

4. POTTER, Norman. (1969) What is a designer: things, places, messages, London: Studio Vista.

dimensions of design. This requirement involves a sea change in the way that design as a practice is viewed by its practitioners. It requires the acquisition of a research orientation during training - an early initiation into a discipline-specific research culture.

### Developing a Research Culture

Culture is not a straightforward concept as anyone who has encountered Zygmunt Bauman's analysis will know.<sup>5</sup> But certain aspects of the designer's experience, in existential as much as in social terms, reveal the fragmentation and uncertainty of the practitioner's condition. Design knowledge, as expressed competencies, is hard won. A succession of master-apprentice relationships is the making of most designers whilst for some a more isolated struggle set against the background of an unforeseeable succession of design opportunities characterizes their personal development. Traditionally little comes to the designer by way of an openly accessible accumulation of design knowledge. Designers have tended to avoid recording the intricate relationship between the design process and its outcomes and reflecting on the experience of designing in terms of the knowledge it generates of the world. Only infrequently are means sought to produce a transferable knowledge - that rare exhibition that tells the story of a design project,<sup>6</sup> that rare publication that systematizes the knowledge of extensive experience.<sup>7</sup> Most design knowledge dies with the designer. Only when designers believe in and value - and practice as a duty - the systematic documentation and evaluation of designing will things change.

What has already changed is that through the recent proliferation of postgraduate design courses and the address of conferences such as: Design Renaissance (Glasgow 1993),

5. BAUMAN, Zygmunt. *Culture as Praxis*. London: Routledge & Kegan Paul, 1973.

6. For example: *The Car Programme: 52 Months to Job One or How they Designed the Ford Sierra*, Boilerhouse Exhibition, Victoria & Albert Museum, 1982.

7. For example: BRAWNE, Michael. (1992) *From Idea to Building*, Butterworth-Heinemann.

Embodied Knowledge and Virtual Space (London 1995), 4-D Dynamics (Leicester, 1995), and Doctorates in Design (Delft, 1996) expectations have been raised, and numerous groups in universities and in professional practice have begun developing methodologies and establishing values for the future of design as a research practice. Dean Hawkes refers to Lord Esher, former President of the Royal Institute of British Architects, who

*chastised the profession, and in particular its academic members, for allowing themselves to be enchanted by the siren attractions of other disciplines ... [a] state he characterised as 'the flight to the periphery'.*<sup>8</sup>

Now, the return to the centre in architectural design research is underway. *Architectural Research Quarterly* published Hawkes' paper in its first issue in 1995: it is the only refereed journal in the field. Other fields of design are served by *Co-Design*, another new journal with a refereed section. *Design Studies*, which has been published since 1979, has been dominated by the periphery. Perhaps this will change, it needs to: the study of design from a variety of disciplinary perspectives is not the same as the study of possibilities for change from the perspective of design.

### Knowledge and Power in Design Research

Designers are the natural torch bearers for interdisciplinarity. As this study makes visible in its hyperspatial modelling of museum design organization, design addresses the complexity of the human condition because it requires a simultaneous attention to social, psychological, aesthetic, political, ethical as well as technical difficulty. In analytical terms it resists reductionism and pursues the accommodation of difference. It is, therefore, a hopeful resource in the postmodern boom of interdisciplinary research. To make

8. HAWKES, Dean. 'The Centre and the Periphery: some reflections on the nature and conduct of architectural research', *Architectural Research Quarterly*: 1: 1, (1995): pp.8-11.

this a reality, however, designers need to be at the core of a research culture, able to decide who is admitted to design research programmes and who not. This provides the only hope of organizing in the face of already powerful research-based cultures in the sciences and the humanities.

The continued health and influence of the design discipline requires the establishment of a position of strength in relation to disciplines such as management, economics, social science, planning, engineering, etc. each of which derives its credibility with the policy makers, if not always its efficacy in practice, from rigorous and well presented research. Design was born with and developed as a necessary adjunct to industrialization. In the post-industrial era, the so-called information age, a discipline which cannot renew itself in a radical sense and articulate the relevance of that process will surely be extinguished. Therefore, although 'new knowledge' is, one hopes, the outcome of research, the main reason for developing and continuing in a particular research culture is to share in the influence one's discipline gains over the direction of human affairs. In this sense the development of a research culture is not primarily about advancing knowledge, it is about power.

### **Research Agendas**

In the new context the design research agenda arises out of the address of different groups to certain key issues in developing a research methodology:

- formulation of viable research proposals
- organization and monitoring procedures
- quality and breadth of documentation
- aims and methods of analysis
- forms of presentation

- critical feedback

### Formulation of viable research proposals

In 1995 Bruce Archer set out the criteria that define valid research in any field.<sup>9</sup> Applying these specifically to what he originally called 'designerly enquiry' <sup>10</sup> produces a checklist against which one might evaluate the validity of a research project that centres on 'core' design research methods, i.e.:

As a form of applied research the project will:

- employ design methods, techniques, procedures - a design process - that are planned, documented, transparent and open to explanation and interpretation;
- formulate and address explicit questions about possibilities for change in an actual or envisaged practical situations;
- identify specific objects of design through the development of a design programme;
- produce design outcomes, supported by explanation and/or interpretation, that constitute new knowledge; and
- employ forms, methods and techniques of exposition that communicate an intelligible content to appropriate audiences.

As action research, it will, in addition:

- engage in a 'real world' practical situation;
- entail collaboration with individuals and groups whose experience forms the (or one of the) objects of design; and
- include an overarching aim to produce results that feed into more broadly formulated applied research.

9. ARCHER, Bruce. (1995) 'The nature of research', *Co-Design*, 01.02.03-95. p.6.

10. ARCHER, Bruce. (1981) 'A view of the nature of design research' in JACQUES, Robin. & James A. Powell. (eds.) *Design: Science: Method*. Westbury House, pp.34-47.

These general guidelines, however, must be seen in the light of a complexity inherent in the formulation of any object of design. The subject is embedded and simultaneously deconstructed, made non-discreet as an entity.

As this project in modelling museum design organization reveals the complex of spatialities constitutes an unstable

grounding which one may not escape. In a proactive but profoundly ironic gesture a model has been constructed as if the reflective practice of visualization it entails need only gaze upon the actuality, ontically referenced or imagined, of the physical, the social, the individual, and the encrypted. But, this is only an *as if*; the gesture is a designerly manoeuvre. The clearest implication for a decentred view of the human actor, of a holistic view of actor networks, is that the categories of the physical, the social, the individual, and the encrypted have themselves to be compromised. As infinitely fragmented, reconfigurable entities, the actors of whom we speak are neither machines, nor signs, nor bodies plain and simple. They can never be the normative collectivities of components implied by modernity. Since the dominant mode of rationality, the *Telos*, is a myth that has been exploded - a comforting mirage, a discomfiting chimera - we have come to believe that there are only consensual illusions - hyper-realities or virtual realities? - the most enduring of which is the vision of a receding past. Our arrogant chauvinism has us staggering backwards into bedlam.

The designerly gesture may be ironic but it is necessary. To paraphrase Norman Potter, the value of a model is in its rendition of a possibility.<sup>11</sup> But, by making visible a complex of functions, bodies, mechanisms, signs, collectivities, etc. operating in museum design organization one immediately invites the dedifferentiation of its apparently definitive contents. Because complexity, as defined here, imposes interminable reflexivity, it is not the particular model one constructs that matters but the process of modelling itself. From within what is modelled, human perceptions appear to provide a frame of reference but from without, something more radical and immanent is implied - a new ontology.

11. POTTER, Norman. *Models and Constructs: Margin Notes to a Design Culture*. Hyphen Press, 1990.

The invasion of the space of the body, the space of bodies, by the spaces of the virtual, the virtualities of cyber-space, presents the possibility of new hybrid entities and their dynamic interplay in a fused and fluid multidimensional cyber-reality. An intimation of the new ontology is already present.

The curator is being fragmented into a complex of specialist functions: collecting, researching, collection managing, conserving, exhibiting, designing, guarding, interpreting, administrating, etc. We can no longer straightforwardly centre our critical gaze on the professional individual, an indivisible human actor, rather we must scatter our attention across the museum design organization complex to perceive in a pattern of activity an idealized, simulated, reconstructed curatorial role.

Under the structuring power of taxonomy, museum collections were conventionally discreet. They are being fused with archives to form an informatic-material complex whose structure is contingent, fluid, cybernetically determined.

The boundaries defining the designer and the conservator are being eroded. Professional identities are being blurred as each embodies aspects of curatorial knowledge and power in an organizational presence extended by a common aura of computer-mediated intelligence.

Security staff and various surveillance technologies are being enmeshed in the processes of public relations and communication and the resulting hybrid forms embedded in the fabric of buildings, spaces and exhibits - CCTV becomes exhibit, educator becomes intelligence gatherer, guard becomes interpreter, interpreter becomes exhibit component, exhibit becomes building component, etc.

No traditional function or entity remains untouched by the emergence of ironic disassembling virtualities. The new entities construct a greater number of interfaces than

their precursors, have more permeable and mobile boundaries, and therefore, more readily interchange and transform their contents. Moreover, the principle applies at a meta-level. The museal complex is one of a range of compromised institutions participating in a global contest of faculties - the museum boundary extends beyond the walls of its building into the urban environment, beyond the system of its taxonomies into the narratives of existence, beyond the material of its collections into the conservable heritage, beyond the interpretive act of exhibition into the realm of media production and telecommunication, etc. The museum is being fragmented - geographically and cybernetically dispersed - and increasingly it shares the marginal elements that construct its shifting identity with a range of heterogeneous complexes - consultancy and facility services, urban development, tourism and leisure promotion, environmental conservation, etc. may all extend beyond the requirements of purely museological rationale.

The formulation of viable research proposals in the design field must encounter the radical uncertainty inherent in the postmodern, post-structural future of possibilities. The implications, in general terms, for developing designing as a research methodology are paradoxical. The checklist developed from Bruce Archer's list of criteria for what qualifies as research is problematic in every aspect.

The requirement that the design methods, techniques, procedures employed are 'planned' requires us to define the notion of planning in an unorthodox way. We rid the notion of establishing goals, policies, procedures of its teleological overtones - the implication that planning must happen in advance of and have a straightforward intentional relation to implementation. Planning becomes a type of activity distinguished from others in the design/research process by its cognitive style and its characteristic products rather than



by its temporal position in a sequence or cycle of activities.

The requirement that the design/research methods employed are 'transparent and open to explanation and interpretation' requires us to qualify the implied rationality of procedural analysis. The design process admits the non-rational as a consequence of the shift in and out of contrasting cognitive styles. Whilst engaged in self-conscious activities, characterized as 'thinking about design', rational procedures of selecting and evaluating techniques may be entailed. In these moments of the design process a subject-object relation is constructed: the material upon which the designer may act is differentiated out in an analytic sense. However, whilst engaged in unself-conscious activities characterized as 'thinking in designing' non-rational procedures prevail. In these moments the designer is immersed in the work and constructs a de-differentiated identification with the material of the design. The implication for the demand that methods, techniques, procedures are transparent is compromised. The designer, as reflective practitioner, is faced with the task of placing an epistemologically coherent construction on events of which memory and formal documentation provide an incomplete picture. A messiness born of epistemological discontinuity is tidied up in retrospect and 'explanation and interpretation' are therefore collapsed into a process of post-rationalization. The outside observer of events in the design process is equally faced with evidence of the behaviours of the designer and the products of the designing activity which may fail, at first sight, to hang together. Only in retrospect, as a result of an attenuating process of post-rationalization, may the apparent discontinuities and complexities of the design process be made to make sense. Post-rationalization is therefore defined as the characteristic of any explanatory narrative of design process. This means that such explanation necessarily has mythic qualities and is ideological and contingent.

The kind of questions that the procedures of design-erly enquiry best address also pose paradoxical, reflexive problems. The characteristic 'what if ...?' starting point in design leads to an opening up of two fields, a bifurcation of the practical situation into an object of design (the programmatic/ideological arena) and a design project (the process/product arena) - in classical functionalist terms, the problem definition and the solution definition. Design proceeds in parallel to explore the spaces of ideology and process and to develop programme and product as a necessarily holistic activity. At some point, prescribed by contingent circumstance, a realizable possibility for material change is made to crystalize out of the design complex (matrix) via a more or less self-conscious, synthetic process of design communication. Only at this point do the problem definition and the solution definition become focussed, do the precise nature of the question that has been addressed and the consequences that have been embodied in an 'answer', a realizable possibility, become 'explicit'.

The form of research proposal appropriate to the core area of design research is, for the above reasons, unlikely to be conventional. First, rather than demonstrating the potential of a specified methodology to produce a particular form of new knowledge, I believe it should demonstrate the potential of a particular point of departure to open up an appropriate arena of possibilities. Second, given the difficulty any proposal will have in fulfilling normal research funding criteria the destination of any proposal is unlikely to be one of the existing research funding councils. There may be some scope in the approach taken by the independent foundations, but my suspicion is that the multi-client consultant arrangement, typical of the projects undertaken by the architectural/research practice DEGW, offers the greatest scope in the immediate future.<sup>12</sup>

## Organization and monitoring procedures

The nature of the 'project' in designerly enquiry does not lend itself to a detailed procedural pre-programming. Rather the process of designerly enquiry itself generates the immanent possibilities for action. Thinking in doing becomes a traceable phenomenon via the embedded and reflexive documentary activity which embraces the production of the design products - plans, visuals, models, storyboards, etc. - and the production of programmatic information. In the intersubjective arena of the design team, in the broadest sense of all those creatively involved in the shaping of the design situation, the means of communication are simultaneously the means of creative transaction, the substance of a process of social construction. The possibility of an organizational and monitoring construct exists in the moment of semiosis, a pseudosynchronic slice through the social space of the design which is perpetually deferred and may only be reconstructed in an evaluative process of post-rationalization.

The relativism upon which this existential notion of the 'moment of semiosis' appears to depend is countered at the metalevel of enfolded spatialities. Only by committing the 'perfect paralogism', against which Lefebvre warns us, do we confuse the logics of the documentary activity with those of the social matrix and with those of the material realization of a design and of the design's philosophical formations. The charge of relativism loses its bite once we admit the epistemological complexity proper to design: relativism requires a commensurability of terms that cannot survive the discontinuities of navigating radically different spatialities.

In reclaiming design research for designers one is not eliminating the grounded approaches typical of established sociological paradigms. Ethnomethodology, for example, remains viable and open to reinterpretation in terms of the designer's *modus operandi*. However, what the designer is

12. See DUFFY, Frank. (Key note speech) in *Doctorates in Design and Architecture*, conference book, EAAE/Delft University of Technology, 1996.

doing in adopting an ethnomethodological mode of enquiry, perhaps to develop an ‘insider’s’ understanding of the context of the design, is bracketing other activities, cognitively and temporally, in order to introduce conscious analysis into work which is felt to be lacking on an unconscious level. In this case thinking about the design from a participatory perspective temporarily replaces thinking in designing which is essentially egotistical, that is, fully immersed in the material of the design, in an attempt to counter a feeling that, at a particular moment, something is wrong with the ‘fit’ of the design product to its programme. Such an activity is therefore motivated by a perceptual response to the material of the design, its contingent documentary products, and it is purely instrumental. Designerly enquiry pursues a goal other than the explanation which might arise from a social-scientific enquiry: it seeks to produce realizable possibilities rather than an explanation or interpretation of existing phenomena. The design project is literally a ‘project’, an imaginative construct that points forward to a possibility. It, therefore, resists the constraint of epistemological closure which is entailed in any ‘rational’ explanation that points to a probability.

### **Breadth and quality of documentation**

The museum design organization model developed here prompts, at every turn, an attention to product, programme, process and philosophy - the 4Ps of design. The central concern, in developing core design research methodology, is with the production of an externalized, visible documentary product in which the ontic possibilities and the epistemological complexity of the design are amply recorded. The spatialities explored in constructing a holistic modelling of design include a proper account of the

relations between the psycho-social dimensions of design-erly and interpretive activity and the formal and documentary dimensions of the various products upon which must be based analysis and evaluation. Therefore, it is possible to articulate the criteria for quality in the material of research documentation by reference to the appropriate epistemological sphere. For example, a design process model based on the playing off of techniques, methods and media against the scope of cognitive attention to the design (from the smallest relevant detail to the global) can be used to map, track and navigate the design process as experienced, to compare with ideal prescription for the design process, to make visible any deficiencies in documentation early in the process, and to provide a frame of reference against which to post-rationalize the deferred, distorted and distanced psycho-social dimensions of the design.

### **Aims and methods of analysis**

A particular realm of possibilities for change in material conditions and the criteria defining success emerge simultaneously out of the design matrix. Reflexivity is immanent in design research methodology and imposes the need for rigorous iterative procedures of exposition, review and refinement of, what may be thought of as the 'sense-making' aspect of designing. In dealing with complexity, designing does not involve a straightforward, self-conscious process of interpreting given signs and texts. Rather, the activity involves a repeated dedifferentiation and redifferentiation of the space of signs and texts. This is a process that is both creative and interpretive, involves both conscious and self-conscious modes of attention, and, therefore, constructs and reconstructs the material of the world so that they literally 'make sense'. Designing makes visible and

sensible and realizable the possibilities for change in material conditions: as research, it also makes itself visible, sensible and realizable, and thereby open to critical attention.

### **Forms of presentation**

A great deal of experimentation has been undertaken in recent times to explore and evaluate a range of presentation formats for art and design research.<sup>13</sup> The possibilities that have already emerged include the traditional forms of written academic exposition - progress report, working paper, conference paper, journal paper, book chapter, book - forms involving time-based presentation - video, CAD animation, multimedia publication - the traditional forms of artistic exposition - exhibition, performance, documentary production, catalogue annotation, essay - and various innovative combinations of the three types of exposition. The particular form or combination of forms of exposition employed in a specific design research project may need to be innovative. Ultimately, what matters is that the research is communicated unambiguously and persuasively, is open to detailed analysis and critical evaluation, and is in a form appropriate to its information content and intended audience, and suitable for archive storage and retrieval.

### **Critical feedback**

Traditionally the avenues of critical feedback on research include the seminar and the academic journal. Although these remain important channels also for design research, there are others that have a, perhaps, crucial role to play in the future. The distribution of research via the internet offers the potential for a rapid two-way process: in text-based form this is already commonplace. However, with projects such as the three-dimensional virtual museum

13. In particular: Centre for Research in Art and Design (CRiAD), Grays School of Art, The Robert Gordon University; the Royal College of Art; the University of Central England; and the University of Sunderland.

currently under development in the Tel Aviv University's Knowledge Technology Lab,<sup>14</sup> and the 'Conceptual Kiosks' developed by John Morgan at Auburn University, Alabama,<sup>15</sup> the beginnings of a new possibility is evident. The virtual, four-dimensional exposition becomes available to interactive development and critique. In effect, the traditional artistic forms of exposition - the exhibition and its textual supplements, the catalogue and the essay - are made available indefinitely and at a distance. But, more than this, they are integrated in the multimedia format and easily made archivable on optical disk.

### Coda

Design is in the marketplace of ideas: 'No theory today escapes the marketplace. Each one is offered as a possibility among competing opinions'.<sup>16</sup> Without its own core of powerful, intellectual leaders active in investigating through design the direction of future material culture and committed to articulating, communicating and advocating design knowledge, design will suffer technological and political instrumentalization, extra-disciplinary mythologizing, and perhaps oblivion.

This project is in at the beginning of a long-term collaborative project which aims to pull the design discipline up by its boot straps. If we sustain our postgraduate students in a newly invigorated research environment and help them to develop ways of designing and communicating that command the serious attention of others, we can look forward to a future in which designers have a commensurate share in the exercise of power.

14. *Times Higher Education Supplement*, Multimedia Features, 12 April 1996. p.vi.

15. MORGAN, John S. 'Conceptual Kiosks: New Information Environments' in *4D Dynamics: Proceedings of the Design Research Society Conference held in Leicester 21 September 1995*. Compiled by Alec ROBERTSON, De Montfort University/Design Research Society, 1995.

16. ADORNO, Theodor. [1966] *Negative Dialectics*. Trans. E B Ashton. London: Routledge & Kegan Paul, 1973. p.4.

## GLOSSARY

<b>Artwork</b>	Illustration, photography, typography or three-dimensional material, or any combination of these used as an original image and presented with specifications for graphic reproduction.
<b>Briefing Process</b>	A dialogue between client and designer which produces a progressively more adequate or detailed design brief.
<b>Design Brief</b>	A document defining the nature of a specific design project - an initial brief may be a short general definition, a final brief may include: context of the project; overall aims and objectives; physical, human and financial resources available; organization and timescale; detailed functional requirements; performance criteria; etc. (see: Design Programme) 'Brief' is the common British term.
<b>Design Concept</b>	A design idea which has been visualized and therefore given potentially realizable visual and material qualities.
<b>Design Contract</b>	A contract between the designer and the client.
<b>Design Idea</b>	1. A transcendent design archetype. 2. An intention for a design which exists in the mind and may be expressed in words.
<b>Design Philosophy</b>	1. The theory or principles underpinning design activity. 2. An explicit system of values and beliefs about the nature and meaning of design in general.
<b>Design Process</b>	1. An ideal or generic model of design activity (used as a conceptual tool). 2. A particular way of conducting design activity.
<b>Design Programme</b>	The object of design: the practical situation, the design idea or design problem, and the design process encompassed by a system of documentary procedures (see: Design Brief) 'program' is the common American term.
<b>Design Rationale</b>	1. The designer's way of explaining the what? when? how? and, most importantly, the why? of designing. 2. A systematic written justification for a particular design.
<b>Design Object</b>	The end product of the design process: the thing, place, message, system that results from the implementation of the design.
<b>Display</b>	1. A general term which can refer to an individual exhibit, groups of exhibits or an entire exhibition. <sup>1</sup> 2. An organized arrangement of artefacts and/or information.
<b>Exhibit</b>	1. A single unit within an exhibition... <sup>1</sup> 2. Any organized combination of artefact(s), information in graphic, typographic and audiovisual form, supporting structure, and enclosure or housing, which is designed to communicate.



<b>Exhibition</b>	Any organized assemblage of exhibits which is designed to serve an overall purpose or present a theme or narrative.
<b>Interpretive Scheme</b>	The information structure or narrative/thematic framework and the system of collection organization used to guide the design of museum communications, particularly: exhibits, exhibitions, educational programmes, publications and publicity. <sup>2</sup>
<b>Mock-up</b>	A roughly constructed approximation to a finished exhibit, usually produced for purposes of evaluation... <sup>1</sup>
<b>Mood Board</b>	Any assemblage of images, materials and/or objects mounted on a board to convey an abstract notion of the ambience, style, feel, mood, etc. of an interior, place, exhibit - usually produced early in the design process as a visual reference/ <i>aide-memoire</i> .
<b>Object of Design</b>	see: Design Programme.
<b>Specifications</b>	Details of dimensions, materials, methods of production, finishes, etc. required to produce and install an exhibit or exhibition. Specifications are annotated on the artwork or working drawings, as appropriate. In complex work they are also normally produced as a written document.
<b>Story-board</b>	1. A series of key images for a proposed exhibit, etc. with copy and directions beneath. <sup>1</sup> 2. The technique of explaining a sequence of events, images or views in an audiovisual presentation, exhibit or exhibition using a series of captioned visuals.
<b>Visual</b>	A perspective drawing or a plan of the basic elements of a design <sup>1</sup> - usually rendered in tone or colour.
<b>Visualization</b>	The process of externalizing ideas and making them visually comprehensible to others.
<b>Working Drawings</b>	A series of drawings produced to communicate exhibit construction and installation to an exhibition contractor.

1. MILES, Roger S. et al. *The Design of Educational Exhibits*. Unwin Hyman, 1982.

2. MATTHEWS, Geoff. *Museums and Art Galleries: A Design and Development Guide*. Butterworth Architecture, 1991.

## Appendices

---

A.1 Notation

A.2 Museum Staffing

## A.1 - Notation

The system of notation used throughout this thesis is designed to reflect each of the following criteria (see 3.1 Organization): use in analysis and design; clear visualization of interval and space; and flexibility in juxtaposing dimensions however they may be

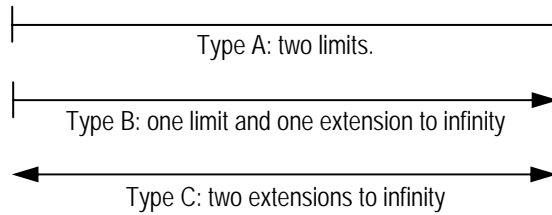


Figure A.1.1

One-dimensional schemata.

characterized: i.e. scale (proportion/speed), scope (range/distance), series (sequence/cycle), or spectrum (band/continuum). Below are set out the schemata for notating one-dimensionality (Figure A.1.1) and two-dimensionality (Figure A.1.2.)

Although it would be possible to render the three-dimensional schemata quite clearly using a conventional projection such as oblique, isometric or perspective. I have assumed that in principle the system of notation can be understood from the one and two-dimensional schemata and a single example of three-dimensional notation (Figure A.1.3.)

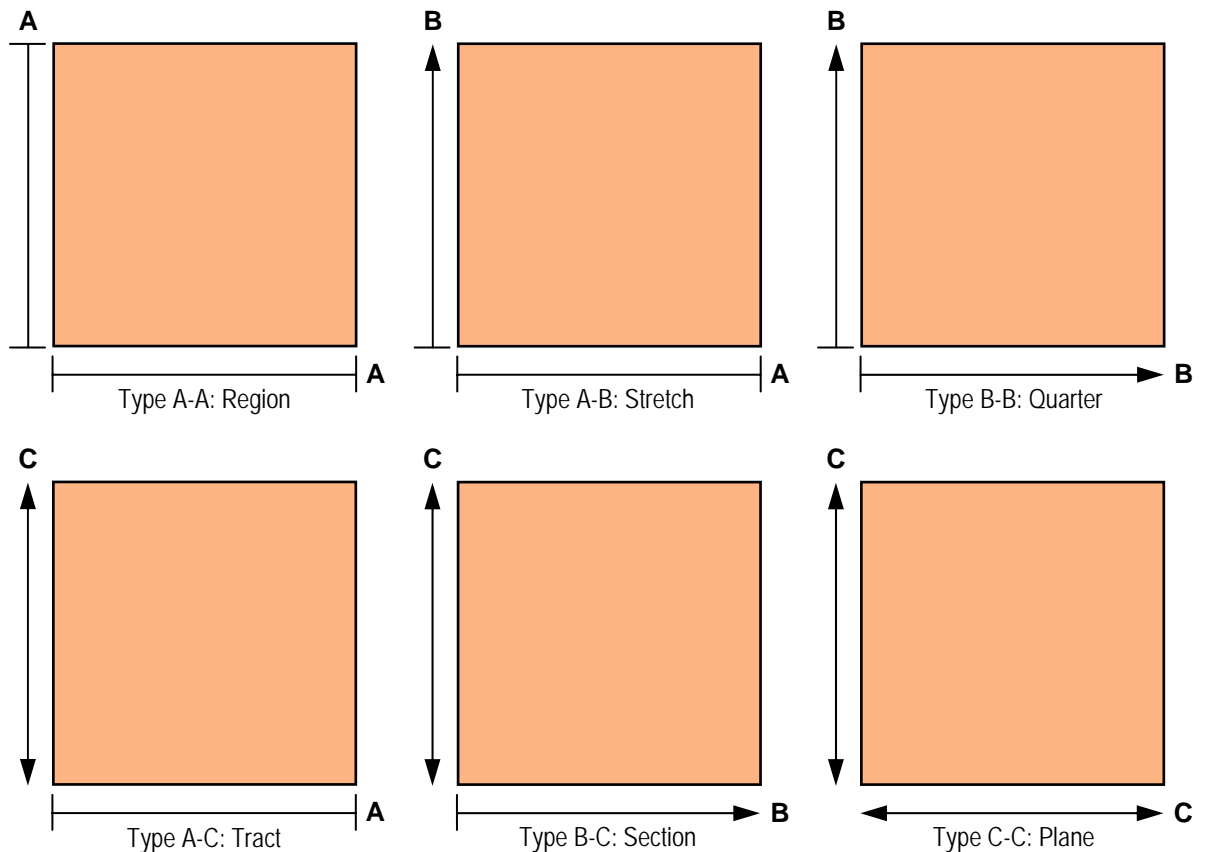


Figure 5.2.3

A performative social space in which overlapping zones are contingently defined by distributed concerns, locations are interrelated and channels of communication polyvalent.

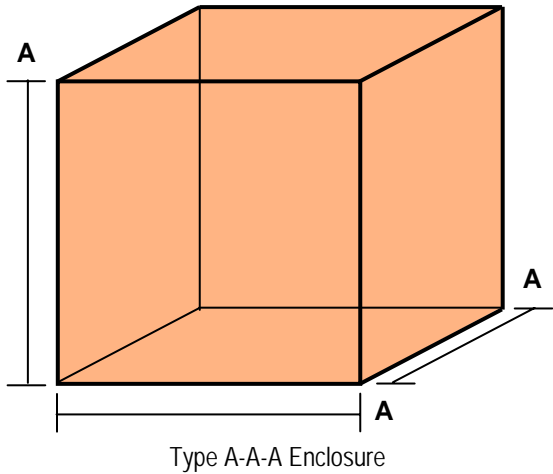


Figure A.1.3  
Example three-dimensional schema (oblique projection)

The number of schemata for each level of dimensionality follows the triangle summation rule (Figure A.1.4). Although computer software does exist for visual virtual modelling in three-dimensions, none is intended

for this application. As the project ultimately demands a dimensionality higher than three in any case I have generally resorted to the style of graphic series mapping techniques demonstrated in Hofstede’s work and referred to above (3.1.)

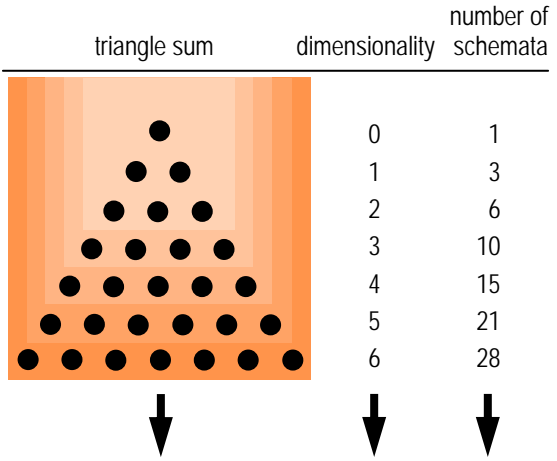


Figure A.1.4  
Calculating the number of types of schemata at a particular level of dimensionality.

A.2 - Museum Staffing

This analysis is based on ‘Staffing Profiles – Overview’ in PRINCE & HIGGINS-McLOUGHLIN, 1987. pp.78-80. and Figure 4.2 ‘Proportion of total full-time staff employed in each activity, by type of museum’, p.81. (See above: 2.3 Museum, note 50.)

1. Manpower Services Commission - qualified but long-term unemployed people engaged on special projects. The scheme was terminated by the Government in 199?

	Full-time	Part-time	Volunteer	MSC	Total	(N)
Nationals	4341	277	129	65	4812	77
Local Authority	3728	934	1646	938	7246	525
Others	1976	1267	7562	1203	12,008	618
All	10,045	2478	9337	2206	24,066	1220

Figure A.2.1  
Numbers of full-time, part-time, volunteer and MSC<sup>1</sup> staff by type of museum.

	Full-time	Part-time	Volunteer	MSC	Total
Nationals	90.22	5.75	2.68	1.35	100
Local Authority	51.45	12.89	22.71	12.95	100
Others	16.45	10.55	62.98	10.02	100
All	41.74	10.30	38.80	9.16	100

Figure A.2.2

Percentage of full-time, part-time, volunteer and MSC staff by type of museum.

	Full-time	Part-time	Volunteer	MSC	Total
Nationals	56.38	3.60	1.67	0.84	62.49
Local Authority	7.10	1.78	3.13	1.79	13.80
Others	3.20	2.05	12.24	1.94	19.43
All	8.23	2.03	7.65	1.81	19.73

Figure A.2.3

Mean numbers of full-time, part-time, volunteer and MSC staff in a museum, by type of museum.

	%(2)	mean number
Nationals	9.9	5.58
Local Authority	19.6	1.39
Others	11.1	0.35
All	15.0	1.23

2. These figures derive from the answers to a different section of the original Museums Database questionnaire and are therefore based on a different response rate to those in Figures A.2.1-3.

Figure A.2.4

Full-time staff employed in curatorship by type of museum.

## Bibliography

---

- *Doctorates in Design and Architecture*, EAAE Conference Book, Delft University of Technology, 1996.
- *Longman Dictionary of the English Language*, Longman, 1984.
- *The Car Programme: 52 Months to Job One or How they Designed the Ford Sierra*, Boilerhouse Exhibition, Victoria & Albert Museum, 1982.
- *The Concise Oxford Dictionary*, Sixth edn. 1976.
- *The Reader's Digest Great World Atlas*, Reader's Digest Association, 1962.
- *Times Higher Education Supplement*, Multimedia Features, 12 April 1996.
- ADORNO, Theodor. [1966] *Negative Dialectics*, trans. E. B. Ashton, London: Routledge & Kegan Paul, 1973,
- AGNEW, Kenneth. 'The Spitfire: Legend or History? An Argument for a New Research Culture in Design', *Journal of Design History*, 6:2, pp.121-30.
- AHRNE, Göran. *Social Organizations: Interaction inside, outside and between organizations*, Sage Publications, 1994.
- ALDERSEY-WILLAMS, Hugh. *King and Miranda: The Poetry of the Machine*, Fourth Estate, 1991.
- ALEXANDER, Christopher. *Notes on the Synthesis of Form*, Cambridge Mass: Harvard University Press, 1964
- ALEXANDER, Edward P. *Museums in Motion*, Nashville: American Association for State and Local History, 1979
- ALLEN, V L. *Social Analysis: a Marxist Critique and Alternative*, Longmans, 1975.
- ALLINSON, Kenneth. *The Wild Card of Design: a perspective on architecture in a project management environment*, Butterworth Architecture, 1993.
- ALLWOOD, John & Bryan MONTGOMERY. *Exhibition Planning and Design: A Guide for Exhibitors, Designers and Contractors*, Batsford, 1989.
- AMBROSE, Timothy & Sue RUNYARD (eds.) *Forward Planning: a handbook of business, corporate and development planning for museums and galleries*, London: Routledge, 1991.
- ARCHER, Bruce. 'The nature of research', *CoDesign*, 01.02.03-95. p.6.
- ARENDT, Hannah. *The Human Condition*, University of Chicago Press, 1958.
- ARNHEIM, Rudolf. *Visual Thinking*, Faber & Faber, 1969.
- ATKINSON, D. *Orthodox Consensus and Radical Alternative*, Heinemann, 1972.
- AUSTIN-BROOS, Diane J. (ed.) *Creating Culture*, Allen & Unwin, 1987.
- AYER, A. J. *Philosophy in the Twentieth Century*, Weidenfeld & Nicolson, 1982.
- BANNET, Eve Tavor. *Structuralism and the Logic of Dissent*, Macmillan, 1989.
- BAUDRILLARD, Jean. *Selected Writings*, introduced and edited by Mark POSTER Polity Press, 1988.

- BAUMAN, Zygmunt. *Culture as Praxis*, London: Routledge & Kegan Paul, 1973.
- BAUMAN, Zygmunt. *Postmodern Ethics*, Blackwell, 1993.
- BAYNES, Kenneth, James BOHMAN & Thomas McCARTHY. (eds.) *After Philosophy: End or Transformation?* MIT Press, 1987.
- BEAVEN, L and D. DRY, *The Architect's Job Book 4th edition*, London: RIBA Publications, 1983.
- BELCHER, Michael. *Exhibitions in Museums*, Leicester University Press, 1991.
- BENNETT, Tony. 'The Exhibitionary Complex.' *New Formations*, 1988/4, pp. 73-102.
- BERGER, Peter & Thomas LUCKMANN. *The Social Construction of Reality*, Penguin, 1967.
- BERNSTEIN, Jeremy. *Einstein*, Fontana, 1973.
- BERNSTEIN, Richard J. *The New Constellation*, Polity Press, 1991.
- BHASKAR, Ray. *Reclaiming Reality*, Verso, 1989.
- BIJKER, Weibe E., Thomas P. HUGHES & Trevor PINCH. *The Social Construction of Technological Systems*, MIT Press, 1987.
- BLAU, Judith R. *Architects and Firms: A Sociological Perspective on Architectural Practice*, MIT Press, 1984.
- BLOOM, Harold. *et al Deconstruction and Criticism*, New York: The Seabury Press, 1979.
- BOCOCK, Robert. *Sigmund Freud*, Ellis Horwood, 1983.
- BOURDIEU, Pierre. [1979] *Distinction: A Social Critique of the Judgement of Taste*, trans. Richard Nice, Routledge & Kegan Paul, 1984.
- BOYLAN, Patrick (ed.) *Museums 2000: Politics, People, Professionals and Profit*, Museums Association/Routledge, 1992.
- BRAWNE, M. *From Idea to Building*, Butterworth Architecture, 1992
- BRAWNE, M. *The Museum Interior*, Thames and Hudson, 1982
- BRUNELLI, Maria Teresa. 'The Role of Design in the Management of Museums' (PhD thesis) Institute of Advanced Studies, Manchester Metropolitan University, 1993.
- BRYSON, Norman., Michael Ann HOLLY & Keith MOXEY (eds.) *Visual Theory*, Polity Press, 1991.
- BUCKLEY, W. 'Social Stratification and the Functional Theory of Differentiation', *American Sociological Review*, 23, pp.369-75.
- BURRELL, Gibson. & Gareth MORGAN. *Sociological Paradigms and Organisational Analysis*, Heinemann Educational Books, 1979.
- CALDER, Nigel. *Technopolis: Social control of the uses of science*, MacGibbon & Kee, 1969.
- CAMUS, Albert. [1951] *The Rebel*, trans. Anthony Bower, Hamish Hamilton, 1953.
- CAPRA, Fritjof *The Tao of Physics*, Wildwood House, 1975.

- CAPRA, Fritjof. *The Turning Point: Science, Society and the Rising Culture*, USA: Simon & Schuster, 1982.
- CHAPPELL, David. *Report Writing for Architects 2nd Edition*, Legal Studies & Services Ltd., 1989.
- CHECKLAND, Peter. *Systems Thinking, Systems Practice*, John Wiley, 1981.
- CHERMAYEFF, Serge & Christopher ALEXANDER. *Community and Privacy*, USA: Doubleday, 1963.
- COHEN, P. *Modern Social Theory*, Heinemann, 1968.
- COOPER, Robert. 'Information, Communication and Organization: A Post-Structural Revision', *The Journal of Mind and Behaviour*, The Institute of Mind and Behaviour, Summer 1987, Vol. 8, No. 3. pp. 395-416.
- COOPER, Robert. 'Organization/Disorganization', *Social Science Information*, SAGE, 25:2, 1986, pp.299-335
- COSSONS, Neil. (ed.) *The Management of Change in Museums*, National Maritime Museum, 1985.
- COSSONS, Neil. 'Presidential Address', *Museums Journal*, Dec. 1982.
- COUNCIL on ENVIRONMENTAL QUALITY and the DEPARTMENT of STATE, *The Global 2000 Report to the President: Entering the Twenty-First Century*, Allen Lane, 1982.
- CROSS, Nigel. (ed.) *Design Participation*, Academy Editions, 1972.
- CROSS, Nigel. (ed.) *Developments in Design Methodology*, John Wiley & Sons, 1984.
- CROSS, Nigel. 'Styles of learning, designing and computing', *Design Studies*, Vol. 6, No. 3, July 1985, pp.157-62.
- CROSS, Nigel. 'The nature and nurture of design ability', *Design Studies* Vol. 11 No. 3 July 1990, pp. 127-40.
- CUFF, Dana. *Architecture: The Story of Practice*, MIT Press, 1991.
- CULLER, Jonathan. *Saussure*, Fontana, 1976.
- CUPCHIK, Gerald C. & János LÁSZLÓ (eds.) *Emerging Visions of the Aesthetic Process: Psychology, Semiology and Philosophy*, Cambridge University Press, 1992.
- CZARNIAWSKA-JOERGES, B. 'Narration or Science? Collapsing the Division in Organization Studies', *Organization*, 2:1, Sage, 1995, pp.11-33.
- DARKE, Jane. 'The Primary Generator and the Design Process', *Design Studies* Vol. 1, No. 1, 1979, pp.36-44.
- DAVIES, Paul & John Gribbin. *The Matter Myth: Beyond Chaos and Complexity*, Penguin, 1992.
- DAVIES, Stuart. *By the Gains of Industry: Birmingham Museums and Art Gallery 1885-1985*, Birmingham Museums and Art Gallery, 1985
- DAVIS, Douglas. *The Museum Transformed*, New York: Abbeville Press, 1990.
- DAWKINS, Richard. *The Blind Watchmaker*, Longman, 1986.
- DEAN, David. *Museum Exhibition: Theory and Practice*, Routledge, 1994.



- DENISOFF, R. *et al. Theories and Paradigms in Contemporary Sociology*, New York: Peacock, 1974.
- DERRIDA, Jacques. [1967] *Writing and Difference*, trans. Alan Bass, Routledge & Kegan Paul, 1978.
- DESCARTES, René. *Discourse on Method and the Meditations*, trans. F E Sutcliffe, Penguin, 1968.
- DINHAM, S. M. 'Teaching as design: theory, research and implications for design teaching', *Design Studies* Vol. 10 No 2, 1989 pp. 80-8.
- DIPROSE, Rosalyn & Robyn FERRELL. (eds.) *Cartographies: Poststructuralism and the Mapping of Bodies and Spaces*, Australia: Allen & Unwin, 1991.
- DORMER, Peter. *Design Since 1945*, Thames & Hudson, 1993
- DORMER, Peter. *The Meanings of Modern Design*, Thames & Hudson, 1990.
- EAGLETON, Terry. *Ideology: an introduction*, Verso, 1991
- ECO, Umberto. *Apocalypse Postponed*, Indiana University Press/British Film Institute, 1994.
- ECO, Umberto. *A Theory of Semiotics*, Bloomington: Indiana University Press, 1979.
- ECOLOGIST, The. *A Blueprint for Survival*, revised edn. Penguin, 1972.
- EFFRAT, A. (ed.) *Perspectives in Political Sociology*, New York: Bobbs-Merrill, 1973.
- EHRENZWEIG, Anton. *The Hidden Order of Art*, Weidenfeld & Nicolson, 1967.
- EVANS, Barrie., James Powell & Reg Talbot (eds.) *Changing Design*, John Wiley & Sons, 1982
- FEATHERSTONE, Mike. *Consumer Culture & Postmodernism*, Sage, 1991.
- FERGUSON, Russell. *et al* (eds.) *Out There: Marginalization and Contemporary Cultures*, New York: The New Museum of Contemporary Art & Cambridge Mass: MIT Press, 1990.
- FEYERABEND, Paul. [1975] *Against Method*, revised edn. London: Verso, 1988.
- FINEMAN, Stephen. (ed.) *Emotion in Organizations*, Sage, 1993.
- FLEW, Antony. (Consultant ed.) *A Dictionary of Philosophy*, Pan Books, 1979.
- FORDHAM, Frieda. *An Introduction to Jung's Psychology*, Penguin, 1953.
- FORTY, Adrian. *Objects of Desire: Design and Society Since 1750*, Thames & Hudson, 1986.
- FOSTER, Hal. (ed.) *Postmodern Culture*, Pluto Press, 1985.
- FOUCAULT, Michel. [1963] *The Birth of the Clinic*, trans. A. M. Sheridan, Tavistock, 1973.
- FOUCAULT, Michel. [1966] *The Order of Things: An Archaeology of the Human Sciences*, Tavistock, 1970.
- FOUCAULT, Michel. [1969] *The Archaeology of Knowledge*, trans. A M Sheridan, Tavistock, 1972.

- FRANKFORT, Henri. *et al. Before Philosophy*, (First published as *The Intellectual Adventure of Ancient Man*, University of Chicago, 1946.) Pelican, 1949.
- FRAYLING, C. 'Artefacts Rather than Arty Facts', *The Times Higher Education Supplement*, 10 May 1994.
- FRIEDRICHS, R. *A Sociology of Sociology*, New York: Free Press, 1970.
- GADAMER, Hans-Georg. *Truth and Method*, Sheed & Ward, 1975.
- GANDY, Oscar H. Jnr. *The Panoptic Sort: A Political Economy of Personal Information*, Westview Press, 1993.
- GARDNER, James. *The Artful Designer: Ideas off the Drawing Board*, 1993.
- GASPARSKI, W. 'On the General Theory (Praxiology) of Design', Department of Praxiology, Polish Academy of Sciences, 1985?
- GEERTZ, Clifford. *Local Knowledge*, New York: Basic Books, 1983.
- GEERTZ, Clifford. *The Interpretation of Cultures*, New York: Basic Books, 1973.
- GIBSON, William. *Neuromancer*, Victor Gollancz, 1984.
- GLUSBERG, Jorge. (ed.) *Deconstruction: A Student Guide. Journal of Architectural Theory and Criticism*, 1:2:91, Academy Editions, 1991.
- GOSLETT, Dorothy. *The Professional Practice of Design*, revised edn. Batsford, 1971.
- GOULDNER, A W. *The Coming Crisis of Western Sociology*, Heinemann, 1970.
- GREENHILL, Basil (ed.) *The National Maritime Museum*, Philip Wilson, 1982.
- GREGORY, Richard L. *Eye and Brain*, Weidenfeld and Nicolson, 1966.
- GREGORY, Richard L. *The Intelligent Eye*, Weidenfeld and Nicolson, 1970.
- GROSS, L. (ed.) *Symposium on Social Theory*, New York: Row Peterson, 1959.
- HABERMAS, Jurgen [1981] *The Theory of Communicative Action*, trans Thomas McCarthy, Boston: Beacon Press, 1987.
- HALE, Prof. Sir John. *et al. Museum Professional Training and Career Structure: Report by a Working Party*, Museums & Galleries Commission, 1987.
- HALL, Margaret. *On Display*, Lund Humphries, 1987
- HARRISON, Andrew. *Making & Thinking: A Study of Intelligent Activities*, Harvester Press, 1978.
- HASSARD, John. *Sociology and Organization Theory*, Cambridge University Press, 1993.
- HAWKES, Dean. 'The centre and the periphery: some reflections on the nature and conduct of architectural research', *Architectural Research Quarterly* 1:1, 1995, pp.8-11.
- HAWKES, Terence. *Structuralism and Semiotics*, Methuen, 1977.
- HAWKING, S. *A Brief History of Time From the Big Bang to Black Holes*, Bantam, 1988.
- HEIDEGGER, Martin. *Being and Time*, trans. John Macquarrie & Edward Robinson, Oxford: Basil Blackwell, 1962.
- HODDER, Ian. (ed.) *The Meanings of Things Material Culture and Symbolic Expression*, Harper Collins, 1989.

- HOFSTEDE, Geert. *Cultures and Organizations: Intercultural Cooperation and its Importance for Survival; Software of the Mind*, McGraw-Hill, 1991.
- HOOPER-GREENHILL, Eilean. (ed.) *Museum Media Message*, Routledge, 1995.
- HOOPER-GREENHILL, Eilean. *Museums and their Visitors*, Routledge, 1994.
- HOOPER-GREENHILL, Eilean. *Museums and the Shaping of Knowledge*, London: Routledge, 1992.
- HUDSON, Kenneth. *Museums of Influence*, Cambridge University Press, 1987.
- JACKSON, N. & P. CARTER. 'The Attenuating Function of Myth in Human Understanding', *Human Relations*, Vol. 37, No. 7, 1984, pp.515-33.
- JACKSON, N. & P. CARTER. 'The Ergonomics of Desire', *Personnel Review*, 14:3, 1985, pp.20-8.
- JACKSON, N. & P. CARTER 'In Defence of Paradigm Incommensurability', School of Management Working Paper HUSM/PC/2, University of Hull.
- JACQUES, Robin. & James A. POWELL. (eds.) *Design: Science: Method*, Westbury House, 1981.
- JAMES, William. [1907] *Pragmatism*, ed. Bruce Kuklick, Indianapolis: Hackett Publishing, 1981.
- JAY, Martin. *Adorno*, Fontana, 1984.
- JENCKS, Charles. *What is Post-Modernism?* Academy Editions, 1986.
- JONES, J. Christopher. *Designing Designing*, Architecture Design and Technology Press, 1991 (previously published as *Essays in Design*, John Wiley & Sons, 1984.)
- JONES, J. Christopher. *Design Methods: Seeds of Human Futures*, revised edn. John Wiley & Sons, 1981.
- JONES, J. C. & D. THORNLEY. (eds.) *Conference on Design Methods*, Pergamon, 1963.
- JONES, Steven G. (ed.) *CyberSociety: Computer-Mediated Communication and Community*, Sage Publications, 1995.
- JUNG, C. G. *Psychological Types*, trans. H. Godwin Baynes, Kegan Paul, Trench, Trubner, 1926.
- KAVANAGH, Gaynor. (ed.) *Museum Languages*, Leicester University Press, 1991.
- KAVANAGH, Gaynor. (ed.) *The Museums Profession*, Leicester University Press, 1991.
- KEARNEY, Richard. *Poetics of Imagining: from Husserl to Lyotard*, Harper Collins, 1991.
- KENDALL, Stephen. 'On design reasoning: lessons from teaching architectural technology', *Design Studies* Vol. 10, No. 2, 1989, pp. 89-95.
- KUHN, Thomas S. *The Structure of Scientific Revolutions*, 2nd edn. (enlarged) University of Chicago Press, 1970.
- LASH, Scott. & John URRY. *Economies of Signs & Space*, Sage, 1994.
- LAWSON, Bryan. *How Designers Think*, Architectural Press, 1980.
- LAWSON, Hilary. *Reflexivity: The Post-modern Predicament*, London: Hutchinson, 1985.

- LEE, T. Y. & D. F. Radcliffe, 'Innate design abilities of first year engineering and industrial design students', *Design Studies* Vol. 11, No 2, 1990, pp. 96-106.
- LEFEBVRE, Henri. [1974] *The Production of Space*, trans. Donald Nicholson-Smith. Basil Blackwell, 1991.
- LORD, Barry., Gail Dexter LORD & John NICKS. *The Cost of Collecting*, HMSO, 1989.
- LORD, Gail Dexter & Barry (eds.) *The Manual of Museum Planning*, HMSO, 1991.
- LOVELOCK, James. *GAI A*, Oxford University Press, 1979.
- LOWENTHAL, David. *The Past is a Foreign Country*, Cambridge University Press, 1985.
- LYDIATE, Liz. (ed.) *Professional Practice in Design Consultancy*, Design Council, 1992.
- LYOTARD, Jean-François. [1979] *The Postmodern Condition: A Report on Knowledge*, trans. Geoff Bennington & Brian Massumi, Manchester University Press, 1984.
- LYOTARD, Jean-François. [1988] *The Inhuman: Reflections on Time*, trans. Geoffrey Bennington & Rachel Bowlby, Polity Press, 1991.
- MacCARTHY, Fiona & Patrick NUTTGENS. *Eye for Industry: Royal Designers for Industry 1936-1986*, Lund Humphries & the Royal Society of Arts, 1986.
- MacKEITH, Margaret. *The History and Conservation of Shopping Arcades*, Mansell Publishing, 1986.
- MACQUARRIE, John. *Existentialism*, New York: World Publishing, 1972.
- MAGEE, Bryan. *Popper*, Fontana, 1973.
- MARCUSE, Herbert. *Eros and Civilisation*, Routledge & Kegan Paul, 1956.
- MARGOLIN, Victor. *Design Discourse: History, Theory, Criticism*, University of Chicago Press, 1989.
- MATTHEWS, Geoff. 'Invasion of the Body Snatchers: Architecture and Virtual Space', *Culture Theory Criticism Occasional Papers*, University of Humberside, 1994.
- MATTHEWS, Geoff. *Museums and Art Galleries: A Design and Development Guide*, Butterworth Architecture, 1991.
- MAYALL, W. H. *Principles in Design*, Design Council, 1979.
- MEADOWS, Donella H. et al. *The Limits to Growth*, New York: Universe Books, 1972.
- MELHUISH, Clare. 'Light Snacks', *Design Week*, 3 June 1994, pp.16-7.
- MERRIMAN, Nick. *Beyond the Glass Case*, Leicester University Press, 1991.
- MILES, Roger S & Lauro Zavala. (eds.) *Towards the Museum of the Future: New European Perspectives*, Routledge, 1994.
- MILES, R S. et al. *The Design of Educational Exhibits*, Unwin Hyman, 1982.
- MILLER, Edward. *That Noble Cabinet: a history of the British Museum*, Ohio University Press, 1974.
- MITCHELL, C. Thomas. *Redefining Designing: From Form to Experience*, New York: Van Nostrand Reinhold, 1993.

- MORGAN, Gareth. *Images of Organization*, Sage Publications, 1986.
- MUMFORD, Lewis. *The Conduct of Life*, Martin Seeker & Warburg, 1952.
- MURRAY, Callum. 'Ark de Triomphe', *Designers' Journal* No. 78, June 1992. pp.32-8.
- MURRELL, K. F. H. *Ergonomics: Man and his Working Environment*, Chapman and Hall, 1965.
- MUSEUMS ASSOCIATION, *Museums Yearbook*, 1993-94
- MYERSON, Jeremy. (ed.) *Design Renaissance Selected papers from the International Design Congress, Glasgow, 1993*, Open Eye/CSD, 1994.
- NEUTRA, Richard. *Survival Through Design*, Oxford University Press, 1954.
- OLINS, Wally. *Corporate Identity: Making business strategy visible through design*, Thames & Hudson, 1989.
- OVERINGTON, Ian. *Vision and Acquisition*, Pentech Press, 1976.
- PAPANEK, Victor. [1972] *Design for the Real World*, Paladin, 1974.
- PARR, A. E. *Mostly About Museums*, The American Museum of Natural History, 1959.
- PARSONS, T. *The Social System*, Chicago: Free Press, 1951.
- PARSONS, T. *Theories of Society*, New York: Free Press, 1965.
- PEARCE, S. M. *Museums, Objects and Collections: A Cultural Study*, Leicester University Press, 1992.
- POPKIN, Richard H. & Avrum STROLL. *Philosophy Made Simple*, W. H. Allan, 1969.
- POPPER, Karl R. [1963] *Conjectures and Refutations: The Growth of Scientific Knowledge*, Fifth edn. Routledge, 1989.
- POPPER, Karl R. (1972) *Objective Knowledge: an Evolutionary Approach*, 6th edn, rev. and expanded, Oxford University Press, 1981.
- POTTER, Neal. 'Power to the People', *Design Week*, 5.3.1993, p.8.
- POTTER, Norman. *Models and Constructs: Margin Notes to a Design Culture*, Hyphen Press, 1990.
- POTTER, Norman. *What is a Designer: things.places.messages*, revised edn. Hyphen Press, 1980.
- PRINCE, David R. & Bernadette HIGGINS-McLOUGHLIN. *Museums UK: The Findings of the Museums Data-Base Project*, Museums Association, 1987.
- PUGH, D S. (ed.) *Organization Theory*, Penguin, 1971.
- PYE, David. *The Nature and Aesthetics of Design*, Barrie and Jenkins, 1978.
- RIPLEY, Dillon. *The Sacred Grove*, Simon & Schuster, 1969.
- ROBERTSON, Alec. (ed.) *4D Dynamics: Proceedings of the Design Research Society Conference held in Leicester 21 September 1995*, De Montfort University/Design Research Society, 1995.
- RORTY, Richard. [1982] *Consequences of Pragmatism*, Harvester Wheatsheaf, 1991.
- RORTY, Richard. *Contingency, Irony, and Solidarity*, Cambridge University Press, 1989.
- RORTY, Richard. *Philosophy and the Mirror of Nature*, Basil Blackwell, 1980.

- ROYAL ONTARIO MUSEUM. *Communicating with the Museum Visitor: Guidelines for Planning*, ROM, 1976.
- SAMUEL, Raphael and Paul THOMPSON (eds.) *The Myths We Live By*, Routledge, 1990.
- SARTRE, Jean-Paul. [1943] *Being and Nothingness*, trans. Hazel E. Barnes, Methuen, 1958.
- SARUP, Madan. *Post-Structuralism and Postmodernism*, Harvester Wheatsheaf, 1988.
- SCHLERETH, Thomas J. (ed.) *Material Culture Studies in America*, Nashville: American Association for State and Local History, 1982.
- SHOSHKES, Ellen. *The Design Process: Case Studies in Project Development*, Architecture Design and Technology Press, 1990.
- SILVERMAN, H. J. (ed.) *Derrida and Deconstruction*, Routledge, 1989.
- SPARKE, Penny. *An Introduction to Design & Culture in the Twentieth Century*, Unwin Hyman, 1986.
- SPARKE, Penny. *Design in Context*, Quarto Publishing, 1987.
- Systems Practice*, 8:1, Plenum Press, 1995.
- STEPHENSON, Neal. *Snow Crash*, Bantam Books, 1992.
- TAIT, Simon. *Palaces of Discovery: The Changing World of Britain's Museums*, Quiller Press, 1989.
- THACKARA, John. (ed.) *Design After Modernism*, Thames & Hudson, 1988.
- THOMPSON, John. M. A (ed.) *Manual of Curatorship*, Butterworth/Museums Association, second edn. 1992.
- TOPALIAN, Alan. *The Management of Design Projects*, Associated Business Press, 1980.
- VELMANS, Max. 'Physical, Psychological and Virtual Realities', conference preprints, *Embodied Knowledge and Virtual Space*, Goldsmiths College, London, 1995.
- VERGO, P. (ed.) *The New Museology*, Reaktion Books, 1989.
- VIRILIO, Paul. [1984] *Lost Dimension*, trans. Daniel Moshenberg, New York: Semiotext(e), 1991.
- WALKER, John A. *Design History and the History of Design*, Pluto Press, 1989.
- WALKER, Susannah. *Queensbury Hunt: Creativity and Industry*, Fourth Estate, 1992.
- WERLEN, Benno. [1988] *Society, Action and Space: An Alternative Human Geography*, trans. Gayna Walls, Routledge, 1993.
- WESTON, Richard. 'Theory and practice as the century closes' (Book reviews of TSCHUMI, Bernard. *Architecture and Disjunction*, MIT, 1994 and RICHIE, Ian. (Well) *Connected Architecture*, Academy, 1994.) *The Architects' Journal*, 27 July 1994, p.50.
- WILDING, J M. *Perception: from Sense to Object*, Hutchinson, 1982.
- WILSON, Colin. [1956] *The Outsider*, 2nd edn. Pan Books, 1963.

WILSON, David M. *The British Museum: Purpose and Politics*, Trustees of the British Museum, 1989.

WRIGHT, Frank Lloyd. *The Future of Architecture*, Horizon Press, 1953.

## Motion Picture Sources

---

——— *The Late Show*, BBC, 1993. ‘Culture Clash’ debate participants: Professor Lewis Wolpert, Jonathan Miller, Mary Midgley, and Robert Young.

——— *The Terracotta Time Machine*, Horizon, BBC2, 1991.

——— *The Tom Peters Seminar*, video interview with Gary Withers, Creative Director, Imagination (London, 1993.)

CRONENBERG, David (dir.) *The Naked Lunch*, 1993.

MILLER, Jonathan. *Madness*, final part, BBC Television, 1991.

SCOTT, Ridley (dir.) *Blade Runner*, Warner Brothers, 1982.